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TIMBER RESOURCE OF MISSOURI'S
eastern ozarks

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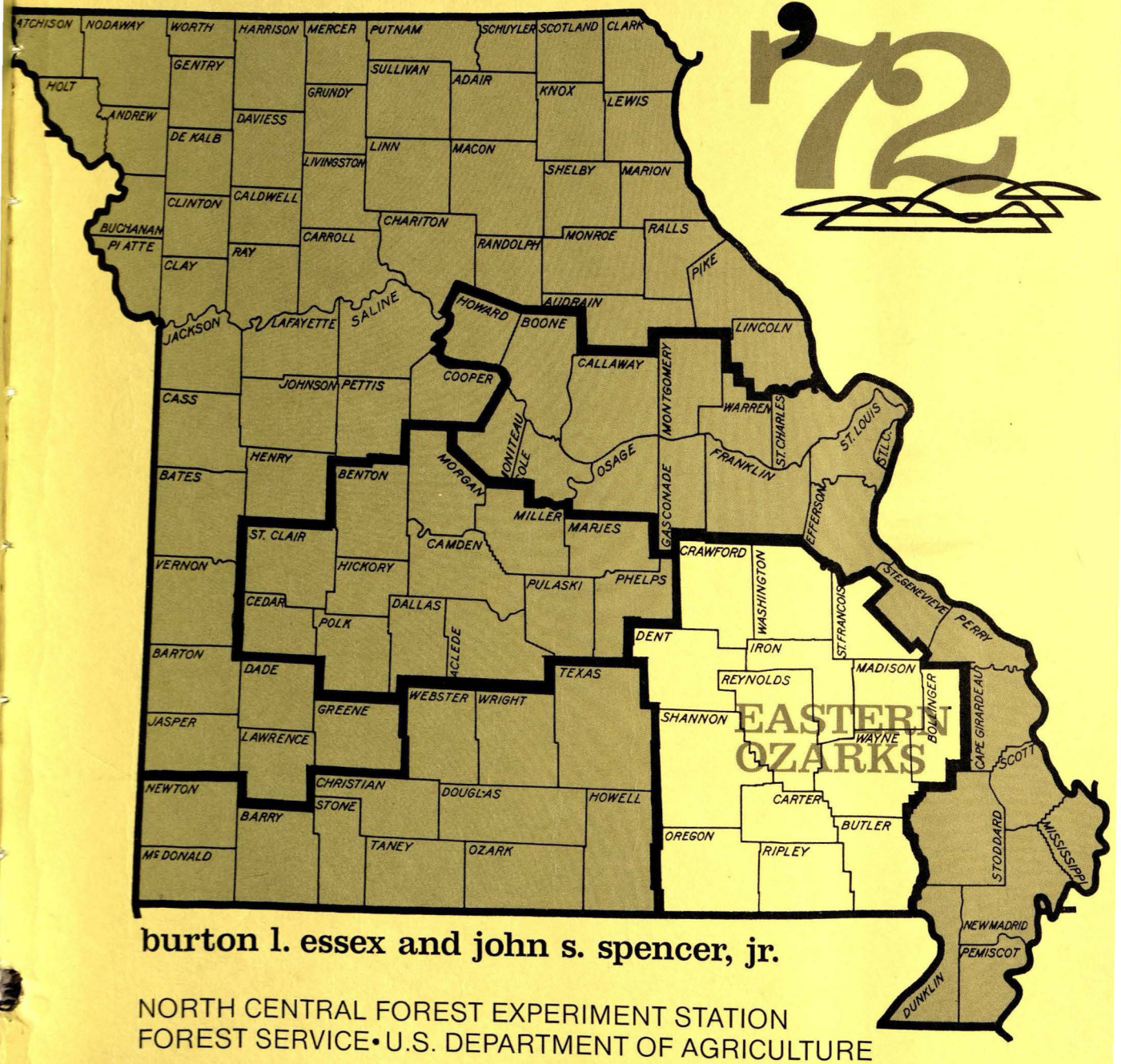

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NORTH CENTRAL FOREST EXPERIMENT STATION
FOREST SERVICE• U.S. DEPARTMENT OF AGRICULTURE

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1974. Timber resource of Missouri's Eastern Ozarks, 1972. North Cent. For. Exp. Stn., St. Paul, Minn. 62 p. (USDA For. Serv. Resour. Bull. NC-19)

The third timber inventory of Missouri's Eastern Ozarks Forest Survey Unit shows that there was a substantial gain in the volume of growing stock and a smaller but sizable gain in the volume of sawtimber between 1959 and 1972; however, the area of commercial forest land declined slightly. This report gives statistical highlights and tables presenting detailed information concerning forest area as well as timber volume, growth, mortality, ownership, and use.

OXFORD: 524.1:905.2(778). KEY WORDS: timber volume, growth, utilization, forest areas.

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FOREWORD

Forest Survey is a continuing endeavor as mandated by the McSweeney-McNary Forest Research Act of 1928. Its objective is to inventory periodically the Nation's forest lands to determine their extent, condition, and volumes of timber, growth, and depletions. This kind of up-to-date information is essential to frame intelligent forest policies and programs. USDA Forest Service regional experiment stations are charged with the responsibility for conducting these inventories and publishing summary reports for individual States. The North Central Forest Experiment Station is responsible for Forest Survey work done in Michigan, Wisconsin, Minnesota, North Dakota, eastern South Dakota, Nebraska, Iowa, Illinois, Indiana, Missouri, and Kansas.

Fieldwork for the 1972 Missouri Forest Survey was started in January 1970 and was completed in May 1973. Reports on the two previous surveys of Missouri's timber resource are dated 1947 and 1959. These earlier reports provide a basis for comparison with the information in this report for those interested in trends that have developed over the past quarter century.

Similar Resource Bulletins reporting statistical highlights and detailed tables on the timber resource of the other Survey Units in Missouri (see cover) are in preparation. These will provide the basis for a comprehensive analysis of the timber resource of the entire State which will be published as a separate report.

A higher degree of accuracy of survey information was obtained during the 1972 survey than otherwise would have been feasible because of intensified field sampling made possible by extra funding provided the North Central Station by the State Legislature through the Missouri Department of Conservation. The Department also conducted a canvass of primary wood-using plants in the State, which was used to help in estimating the quantity of timber products harvested in Missouri.

Personnel from the National Forests in Missouri installed sample plots on national forest lands, which were used to inventory those lands. The USDA Agricultural Stabilization and Conservation Service and the State Historical Society of Missouri furnished aerial photos used in the survey.

N O T E

• References to information concerning growth, mortality, and removals are dated 1971, but information concerning forest area and timber inventory incorporate changes that occurred during calendar year 1971; therefore, they represent conditions as of January 1, 1972 and are dated 1972.

• Many of the terms used in this Resource Bulletin have specialized meanings, which are defined in "Glossary of Terms used in Resource Bulletins Reporting Missouri's 1972 Timber Resource." Copies of this Glossary can be obtained from the North Central Forest Experiment Station.

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TIMBER RESOURCE OF MISSOURI'S EASTERN OZARKS, 1972

Burton L. Essex and John S. Spencer, Jr.

HIGHLIGHTS 1/

Forest Area

Forest land occupies 4.2 million acres (69 percent of the Unit's land area) as compared to 4.4 million acres (71 percent) in 1959.

Of this, 4.1 million acres were classified as commercial forest as compared to 4.3 million acres in 1959.

Shannon County contains the Unit's largest area of commercial forest (477 thousand acres) followed by Reynolds County (423 thousand acres) and Washington County (355 thousand acres).

Farmers, private individuals, and corporations not directly engaged in timber processing own two-thirds of the commercial forest.

The black and scarlet oak type dominated the commercial forest in 1972--1.9 million acres as compared to 2.2 million acres in 1959 in the type.

Poletimber stands constitute the largest stand-size class--48 percent of the commercial forest area.

Timber Volume

Volume of growing stock on commercial forest land was 2.2 billion cubic feet in 1972 as compared to 1.7 billion cubic feet in 1959.

Sawtimber volume increased from 3.5 billion board feet in 1959 to 5.3 billion board feet in 1972.

The oaks alone account for three-fourths of the 1972 growing-stock volume.

Average volume per acre of growing stock is 417 cubic feet (5.3 cords).

Farmers, private individuals, and corporations not directly engaged in timber processing own 61 percent of the growing-stock volume.

Volume in rough and rotten trees that are alive is 766 million cubic feet, most in rough trees.

Stand Conditions

Net annual growth on growing-stock trees was 71 million cubic feet (903 thousand cords) in 1971.

Net annual growth rate of growing stock was 3.2 percent of inventory volume.

Mortality of growing-stock trees amounted to 3 million cubic feet (41 thousand cords) in 1971.

Seventy-four percent of the commercial forest area is capable of growing trees 50 feet and taller at age 50, but only 17 percent is capable of growing

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1/ Published 1959 statistics have been adjusted to be comparable with 1972 data because of changed definitions and procedures used during the two surveys.

trees 70 feet and taller at the same age.

Fifty-seven percent of the commercial forest includes stands younger than 50 years old.

Forty-six percent of the commercial forest is medium stocked or better with growing-stock trees. Only 3.4 percent is classified as nonstocked with these trees. (See glossary for nonstocked areas, page 2.)

Timber Use

Timber removals from growing stock in 1971 amounted to 41 million cubic feet (518 thousand cords)--about 60 percent of the volume of net annual growth. (See glossary for timber removals, page 5).

Total timber products output in 1969 was 55 million cubic feet, 34 million cubic feet of which was in saw logs.

Volume of wood residues from primary plants in 1969 totaled 13 million cubic feet, of which 9 million cubic feet are not utilized.2/

Allowable Cut

For the years 1972 through 1981, annual allowable cut from growing stock on commercial forests is estimated to average 57 million cubic feet (717 thousand cords)--47 million cubic feet from harvest cuttings and 10 million cubic feet from thinnings.

For the same years, annual allowable cut from rough and rotten trees is estimated to average 22 million cubic feet (272 thousand cords).

2/ Primary plants are those using logs and bolts or chips, shavings, etc., from logs and bolts.

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Table 1.--*Area of land by land class, Eastern Ozarks, Missouri, 1959 and 1972*

(Thousand acres)

Land class	1959[1/]	1972
Commercial forest land:		
Shortleaf pine type	232.40	98.20
Eastern redcedar type	24.39	12.40
Eastern redcedar-hardwood type	18.46	20.40
Shortleaf pine-oak type	436.79	211.70
Post-blackjack oak type	540.81	709.40
Black-scarlet oak type	2,216.79	1,896.00
White oak type	389.48	836.60
Oak-gum-cypress type	65.22	13.70
Elm-ash-cottonwood type	106.06	78.50
Maple-beech type	36.16	67.60
Nonstocked	192.80	139.50
Subtotal	4,259.36	4,084.00
Noncommercial forest land:		
Unproductive	71.95	63.30
Productive-reserved	26.50	97.30
Subtotal	98.45	160.60
Nonforest land	1,791.99	1,918.30
Total	6,149.80	6,162.90

1/ Figures have been adjusted from those published previously for 1959 to conform to 1972 land classes because of changes in survey definitions and procedures.

Table 2.--*Area of land and forest land, by county, Eastern Ozarks, Missouri, 1972*

County	Land area	Forest land			Commercial forest as a percent of land area
		All forest	Noncommercial	Commercial	
	Thousand acres				Percent
Bollinger	397.5	203.5	1.8	201.7	51
Butler	457.8	173.9	5.8	168.1	37
Carter	323.9	270.6	18.8	251.8	78
Crawford	486.4	324.5	3.6	320.9	66
Dent	483.5	316.4	8.2	308.2	64
Iron	354.5	289.2	4.1	285.1	80
Madison	317.4	230.5	2.8	227.7	72
Oregon	501.8	323.0	6.6	316.4	63
Reynolds	523.1	436.5	13.5	423.0	80
Ripley	409.0	274.2	4.5	269.7	66
St. Francois	292.3	148.4	7.3	141.1	48
Shannon	639.4	518.4	41.4	477.0	75
Washington	486.4	359.0	4.0	355.0	73
Wayne	490.0	376.5	38.2	338.3	69
All counties	6,163.0	4,244.6	160.6	4,084.0	66

Table 3.--*Area of commercial forest land for Missouri's Eastern Ozarks Survey Unit and for individual counties within Unit, by forest type and stand-size class, 1972*

(Thousand acres)

Forest type	All stands	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas
ALL COUNTIES					
Shortleaf pine	98.2	39.5	39.2	19.5	--
Eastern redcedar	12.4	3.0	1.7	7.7	--
Eastern redcedar-hardwood	20.4	--	1.7	18.7	--
Shortleaf pine-oak	211.7	56.7	122.6	32.4	--
Post-blackjack oak	709.4	142.2	294.4	272.8	--
Black-scarlet oak	1,896.0	603.7	962.8	329.5	--
White oak	836.6	242.7	484.7	109.2	--
Oak-gum-cypress	13.7	7.1	3.6	3.0	--
Elm-ash-cottonwood	78.5	37.1	30.5	10.9	--
Maple-beech	67.6	13.7	30.1	23.8	--
Nonstocked 1/	139.5	--	--	--	139.5
All forest types	4,084.0	1,145.7	1,971.3	827.5	139.5
BOLLINGER COUNTY					
Shortleaf pine	2.0	.5	.9	.6	--
Eastern redcedar	.7	.2	--	.5	--
Eastern redcedar-hardwood	.7	--	--	.7	--
Shortleaf pine-oak	7.1	2.2	3.7	1.2	--
Post-blackjack oak	34.5	7.8	14.8	11.9	--
Black-scarlet oak	92.8	34.7	44.0	14.1	--
White oak	43.9	16.1	23.5	4.3	--
Oak-gum-cypress	1.3	1.1	.1	.1	--
Elm-ash-cottonwood	5.4	3.3	1.6	.5	--
Maple-beech	4.4	1.8	1.4	1.2	--
Nonstocked 1/	8.9	--	--	--	8.9
All forest types	201.7	67.7	90.0	35.1	8.9
BUTLER COUNTY					
Shortleaf pine	9.2	4.5	3.0	1.7	--
Eastern redcedar	.8	.1	--	.7	--
Eastern redcedar-hardwood	1.2	--	--	1.2	--
Shortleaf pine-oak	8.8	2.3	5.5	1.0	--
Post-blackjack oak	26.0	4.8	12.2	9.0	--
Black-scarlet oak	65.0	19.1	34.9	11.0	--
White oak	28.6	9.3	15.8	3.5	--
Oak-gum-cypress	4.0	3.8	--	.2	--
Elm-ash-cottonwood	9.8	6.1	2.9	.8	--
Maple-beech	4.7	1.9	1.0	1.8	--
Nonstocked 1/	10.0	--	--	--	10.0
All forest types	168.1	51.9	75.3	30.9	10.0
CARTER COUNTY					
Shortleaf pine	9.5	3.6	3.4	2.5	--
Eastern redcedar	.7	.2	.1	.4	--
Eastern redcedar-hardwood	1.0	--	.1	.9	--
Shortleaf pine-oak	15.1	3.8	9.1	2.2	--
Post-blackjack oak	43.8	8.6	17.1	18.1	--
Black-scarlet oak	117.1	36.6	58.2	22.3	--
White oak	51.0	14.1	28.9	8.0	--
Oak-gum-cypress	.3	--	.3	--	--
Elm-ash-cottonwood	2.9	.9	1.2	.8	--
Maple-beech	3.1	--	2.0	1.1	--
Nonstocked	7.3	--	--	--	7.3
All forest types	251.8	67.8	120.4	56.3	7.3

1/ See glossary for stand-size classes (page 3)

(Table 3 cont. on next page)

(Table 3 cont.)

CRAWFORD COUNTY

Forest type	All stands	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas
Shortleaf pine	1.9	.4	.9	.6	--
Eastern redcedar	.9	.3	--	.6	--
Eastern redcedar-hardwood	.8	--	--	.8	--
Shortleaf pine-oak	11.7	3.2	6.3	2.2	--
Post-blackjack oak	56.5	11.8	24.4	20.3	--
Black-scarlet oak	154.3	51.2	78.1	25.0	--
White oak	69.3	21.0	40.2	8.1	--
Oak-gum-cypress	.8	--	.3	.5	--
Elm-ash-cottonwood	8.5	4.4	3.1	1.0	--
Maple-beech	5.0	1.3	2.0	1.7	--
Nonstocked 1/	11.2	--	--	--	11.2
All forest types	320.9	93.6	155.3	60.8	11.2

DENT COUNTY

Shortleaf pine	4.2	2.0	1.5	.7	--
Eastern redcedar	.9	.2	--	.7	--
Eastern redcedar-hardwood	1.2	--	--	1.2	--
Shortleaf pine-oak	13.2	3.1	7.3	2.8	--
Post-blackjack oak	57.6	10.6	24.0	23.0	--
Black-scarlet oak	148.7	43.8	76.8	28.1	--
White oak	63.4	15.9	38.7	8.8	--
Oak-gum-cypress	.5	--	.4	.1	--
Elm-ash-cottonwood	3.4	1.1	1.7	.6	--
Maple-beech	4.3	.3	2.4	1.6	--
Nonstocked 1/	10.8	--	--	--	10.8
All forest types	308.2	77.0	152.8	67.6	10.8

IRON COUNTY

Shortleaf pine	3.9	.6	2.1	1.2	--
Eastern redcedar	.6	.1	.2	.3	--
Eastern redcedar-hardwood	1.1	--	.2	.9	--
Shortleaf pine-oak	15.0	3.5	9.5	2.0	--
Post-blackjack oak	49.5	9.8	21.8	17.9	--
Black-scarlet oak	139.3	43.3	74.3	21.7	--
White oak	60.6	16.2	37.4	7.0	--
Oak-gum-cypress	.4	--	.3	.1	--
Elm-ash-cottonwood	3.8	1.4	2.0	.4	--
Maple-beech	3.7	.7	1.3	1.7	--
Nonstocked 1/	7.2	--	--	--	7.2
All forest types	285.1	75.6	149.1	53.2	7.2

MADISON COUNTY

Shortleaf pine	9.6	2.8	4.1	2.7	--
Eastern redcedar	.6	.1	.2	.3	--
Eastern redcedar-hardwood	1.5	--	.2	1.3	--
Shortleaf pine-oak	17.4	4.7	11.3	1.4	--
Post-blackjack oak	34.9	7.9	14.9	12.1	--
Black-scarlet oak	102.8	32.5	54.6	15.7	--
White oak	44.3	11.9	26.6	5.8	--
Oak-gum-cypress	.6	.2	.1	.3	--
Elm-ash-cottonwood	5.0	2.4	1.9	.7	--
Maple-beech	4.5	2.0	1.0	1.5	--
Nonstocked 1/	6.5	--	--	--	6.5
All forest types	227.7	64.5	114.9	41.8	6.5

1/ See glossary for stand-size classes (page 3)

(Table 3 cont. on next page)

(Table 3 cont.)

Forest type	All stands	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas
OREGON COUNTY					
Shortleaf pine	7.0	3.5	2.5	1.0	--
Eastern redcedar	1.3	.5	--	.8	--
Eastern redcedar-hardwood	1.9	--	--	1.9	--
Shortleaf pine-oak	19.0	5.5	9.9	3.6	--
Post-blackjack oak	59.2	11.6	21.2	26.4	--
Black-scarlet oak	142.9	44.3	66.3	32.3	--
White oak	61.8	18.0	32.9	10.9	--
Oak-gum-cypress	.4	--	.3	.1	--
Elm-ash-cottonwood	4.5	2.2	1.4	.9	--
Maple-beech	4.9	.3	3.2	1.4	--
Nonstocked 1/	13.5	--	--	--	13.5
All forest types	316.4	85.9	137.7	79.3	13.5
REYNOLDS COUNTY					
Shortleaf pine	7.2	2.2	2.9	2.1	--
Eastern redcedar	.9	.3	.2	.4	--
Eastern redcedar-hardwood	1.3	--	.2	1.1	--
Shortleaf pine-oak	18.8	5.2	11.1	2.5	--
Post-blackjack oak	71.8	15.7	31.6	24.5	--
Black-scarlet oak	205.2	68.1	106.6	30.5	--
White oak	92.4	27.3	55.1	10.0	--
Oak-gum-cypress	.7	.1	.3	.3	--
Elm-ash-cottonwood	6.8	2.9	3.0	.9	--
Maple-beech	6.3	1.5	2.6	2.2	--
Nonstocked 1/	11.6	--	--	--	11.6
All forest types	423.0	123.3	213.6	74.5	11.6
RIPLEY COUNTY					
Shortleaf pine	10.3	5.5	4.4	.4	--
Eastern redcedar	.8	.1	--	.7	--
Eastern redcedar-hardwood	1.2	--	--	1.2	--
Shortleaf pine-oak	17.1	3.9	10.6	2.6	--
Post-blackjack oak	46.8	8.6	18.4	19.8	--
Black-scarlet oak	119.2	36.1	60.6	22.5	--
White oak	51.6	14.0	29.8	7.8	--
Oak-gum-cypress	1.2	.6	.2	.4	--
Elm-ash-cottonwood	6.9	3.4	2.6	.9	--
Maple-beech	5.2	1.2	2.4	1.6	--
Nonstocked 1/	9.4	--	--	--	9.4
All forest types	269.7	73.4	129.0	57.9	9.4
ST. FRANCOIS COUNTY					
Shortleaf pine	1.2	.1	.5	.6	--
Eastern redcedar	.9	.1	.2	.6	--
Eastern redcedar-hardwood	2.2	--	.2	2.0	--
Shortleaf pine-oak	6.1	.9	3.4	1.8	--
Post-blackjack oak	26.9	4.7	10.3	11.9	--
Black-scarlet oak	62.0	19.4	30.2	12.4	--
White oak	26.2	7.3	15.3	3.6	--
Oak-gum-cypress	.4	--	.1	.3	--
Elm-ash-cottonwood	4.2	1.8	1.4	1.0	--
Maple-beech	3.5	.3	1.8	1.4	--
Nonstocked 1/	7.5	--	--	--	7.5
All forest types	141.1	34.6	63.4	35.6	7.5

1/See glossary for stand-size classes (page 3)

(Table 3 cont. on next page)

(Table 3 cont.)

Forest type	All stands	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas
SHANNON COUNTY					
Shortleaf pine	8.3	3.6	3.4	1.3	--
Eastern redcedar	1.1	.3	.1	.7	--
Eastern redcedar-hardwood	2.3	--	.1	2.2	--
Shortleaf pine-oak	25.2	6.0	14.4	4.8	--
Post-blackjack oak	88.3	15.4	35.1	37.8	--
Black-scarlet oak	227.3	67.7	112.4	47.2	--
White oak	97.8	27.0	55.6	15.2	--
Oak-gum-cypress	1.1	--	1.0	.1	--
Elm-ash-cottonwood	5.3	1.8	2.9	.6	--
Maple-beech	5.8	.2	3.3	2.3	--
Nonstocked 1/	14.5	--	--	--	14.5
All forest types	477.0	122.0	228.3	112.2	14.5
WASHINGTON COUNTY					
Shortleaf pine	10.3	5.5	4.4	.4	--
Eastern redcedar	1.1	.3	.3	.5	--
Eastern redcedar-hardwood	2.1	--	.3	1.8	--
Shortleaf pine-oak	16.8	5.4	9.2	2.2	--
Post-blackjack oak	59.1	13.5	25.1	20.5	--
Black-scarlet oak	165.7	57.5	85.0	23.2	--
White oak	75.6	23.6	44.1	7.9	--
Oak-gum-cypress	.4	--	.1	.3	--
Elm-ash-cottonwood	5.8	2.6	2.6	.6	--
Maple-beech	6.9	1.7	3.1	2.1	--
Nonstocked 1/	11.2	--	--	--	11.2
All forest types	355.0	110.1	174.2	59.5	11.2
WAYNE COUNTY					
Shortleaf pine	13.6	4.7	5.2	3.7	--
Eastern redcedar	1.1	.2	.4	.5	--
Eastern redcedar-hardwood	1.9	--	.4	1.5	--
Shortleaf pine-oak	20.4	7.0	11.3	2.1	--
Post-blackjack oak	54.5	11.4	23.5	19.6	--
Black-scarlet oak	153.7	49.4	80.8	23.5	--
White oak	70.1	21.0	40.8	8.3	--
Oak-gum-cypress	1.6	1.3	.1	.2	--
Elm-ash-cottonwood	6.2	2.8	2.2	1.2	--
Maple-beech	5.3	.5	2.6	2.2	--
Nonstocked 1/	9.9	--	--	--	9.9
All forest types	338.3	98.3	167.3	62.8	9.9

1/ See glossary for stand-size classes (page 3)

Table 4.--*Area of commercial forest land, by county and ownership class, Eastern Ozarks, Missouri, 1972*

(Thousand acres)

County	All ownerships	National Forest	Other federal	State, county and municipal	Forest industry	Farmer and miscellaneous private
Bollinger	201.7	1.4	--	0.3	10.2	189.8
Butler	168.1	47.5	--	7.5	5.6	107.5
Carter	251.8	86.6	--	23.0	17.9	124.3
Crawford	320.9	44.4	--	7.6	--	268.9
Dent	308.2	64.4	--	13.9	13.7	216.2
Iron	285.1	87.0	--	3.1	6.1	188.9
Madison	227.7	34.7	--	--	.1	192.9
Oregon	316.4	90.5	--	--	12.0	213.9
Reynolds	423.0	88.6	--	33.9	70.7	229.8
Ripley	269.7	88.2	--	2.2	5.5	173.8
St. Francois	141.1	.7	--	--	--	140.4
Shannon	477.0	80.9	--	54.1	143.8	198.2
Washington	355.0	72.9	--	3.3	12.0	266.8
Wayne	338.3	82.2	5.8	13.9	9.7	226.7
All counties	4,084.0	870.0	5.8	162.8	307.3	2,738.1

Table 5.--*Area of commercial forest land, by stand-volume and ownership class, Eastern Ozarks, Missouri, 1972*

(Thousand acres)

Stand volume per acre 1/ (board feet)	All ownerships	National Forest	Other federal	State, county and municipal	Forest industry	Farmer and miscellaneous private
Less than 1,500	2,412.1	275.6	3.1	87.7	195.4	1,850.3
1,500 to 5,000	1,505.4	459.3	2.7	67.2	111.9	864.3
More than 5,000	166.5	135.1	--	7.9	--	23.5
All classes	4,084.0	870.0	5.8	162.8	307.3	2,738.1

1/ International 1/4-inch rule.

Table 6.--*Area of commercial forest land, by area-condition and ownership class, Eastern Ozarks, Missouri, 1972*

(Thousand acres)

Area-condition class 1/	All ownerships	National Forest	Other federal	State, county and municipal	Forest industry	Farmer and miscellaneous private
50	163.9	148.4	--	2.8	--	12.7
60	1,722.0	581.2	4.7	78.9	152.5	904.7
70	2,198.1	140.4	1.1	81.1	154.8	1,820.7
All classes	4,084.0	870.0	5.8	162.8	307.3	2,738.1

1/ See glossary for area-condition classes (page 2).

Table 7.--*Area of commercial forest land, by site and ownership class, Eastern Ozarks, Missouri, 1972*

(Thousand acres)

Site class (cubic feet of growth per acre per year)	All ownerships	National Forest	Other federal	State, county and municipal	Forest industry	Farmer and miscellaneous private
85-119	177.0	35.2	1.1	5.9	--	134.8
50-84	1,098.8	296.5	2.4	67.2	96.4	636.3
Less than 50	2,808.2	538.3	2.3	89.7	210.9	1,967.0
All classes	4,084.0	870.0	5.8	162.8	307.3	2,738.1

Table 8.--*Area of commercial forest land, by forest type and ownership class, Eastern Ozarks, Missouri, 1972*

(Thousand acres)

Forest Type	All ownerships	National Forest	Other federal	State, county and municipal	Forest industry	Farmer and miscellaneous private
Shortleaf pine	98.2	87.4	.5	--	--	10.3
Eastern redcedar	12.4	.3	--	1.4	--	10.7
Eastern redcedar-hardwood	20.4	1.1	--	2.2	--	17.1
Shortleaf pine-oak	211.7	133.3	--	11.0	54.0	13.4
Post-blackjack oak	709.4	6.5	--	18.8	70.3	613.8
Black-scarlet oak	1,896.0	424.6	3.6	89.9	156.0	1,221.9
White oak	836.6	208.6	1.2	34.0	14.4	578.4
Oak-gum-cypress	13.7	--	--	--	--	13.7
Elm-ash-cottonwood	78.5	3.6	.5	--	12.6	61.8
Maple-beech	67.6	--	--	2.5	--	65.1
Nonstocked 1/	139.5	4.6	--	3.0	--	131.9
All forest types	4,084.0	870.0	5.8	162.8	307.3	2,738.1

1/ See glossary for stand-size classes (page 3).

Table 9.--*Area of commercial forest land, by forest type and stand-age class, Eastern Ozarks, Missouri, 1972*

(Thousand acres)

Forest type	All ages	Stand-age class (years)										
		0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-119	120+
Shortleaf pine	98.2	11.3	5.0	3.7	25.1	19.7	28.7	4.7	--	--	--	--	--
Eastern redcedar	12.4	3.8	3.9	--	--	--	--	--	4.7	--	--	--	--
Eastern redcedar-hardwood	20.4	5.4	5.1	8.2	--	1.7	--	--	--	--	--	--	--
Shortleaf pine-oak	211.7	4.1	28.3	7.2	36.4	68.2	39.5	13.8	10.8	--	3.4	--	--
Post-blackjack oak	709.4	72.1	162.9	53.8	54.7	86.1	89.9	70.4	34.6	30.7	7.6	35.1	11.5
Black-scarlet oak	1,896.0	96.8	183.6	72.9	280.6	430.2	437.2	159.1	136.0	38.2	30.6	30.8	--
White oak	836.6	45.1	60.1	23.5	58.8	182.8	179.7	105.2	77.8	34.4	38.4	15.4	15.4
Oak-gum-cypress	13.7	3.0	--	--	3.6	7.1	--	--	--	--	--	--	--
Elm-ash-cottonwood	78.5	7.2	3.7	19.9	13.4	15.4	--	6.1	6.6	6.2	--	--	--
Maple-beech	67.6	22.3	4.9	10.6	6.4	6.3	8.9	.6	7.6	--	--	--	--
Nonstocked 1/	139.5	71.0	33.3	9.7	11.2	--	3.7	3.7	3.2	--	3.7	--	--
All forest types	4,084.0	342.1	490.8	209.5	490.2	817.5	787.6	363.6	281.3	109.5	83.7	81.3	26.9

1/See glossary for stand-size classes (page 3).

Table 10.--*Area of commercial forest land, by forest type and site-index class, Eastern Ozarks, Missouri, 1972*

(Thousand acres)

Forest type	All classes	Site-index class (height in feet at 50 years)							
		20-29	30-39	40-49	50-59	60-69	70-79	80-89	90+
Shortleaf pine	98.2	--	3.1	6.0	59.5	21.4	8.2	--	--
Eastern redcedar	12.4	--	4.1	8.3	--	--	--	--	--
Eastern redcedar-hardwood	20.4	--	10.5	4.5	--	5.4	--	--	--
Shortleaf pine-oak	211.7	--	7.2	33.7	75.1	66.1	29.6	--	--
Post-blackjack oak	709.4	7.6	172.7	216.1	216.6	69.8	26.6	--	--
Black-scarlet oak	1,896.0	--	41.8	220.7	621.0	612.3	288.4	104.2	7.6
White oak	836.6	4.1	49.8	173.2	342.1	124.3	100.8	42.3	--
Oak-gum-cypress	13.7	--	--	3.6	3.0	--	3.1	--	4.0
Elm-ash-cottonwood	78.5	--	--	6.2	13.3	20.9	6.4	18.6	13.1
Maple-beech	67.6	--	3.1	23.5	17.5	.6	16.5	3.3	3.1
Nonstocked 1/	139.5	7.5	14.8	40.6	55.7	9.9	7.1	--	3.9
All forest types	4,084.0	19.2	307.1	736.4	1,403.8	930.7	486.7	168.4	31.7

1/ See glossary for stand-size classes (page 3).

Table 11.--*Area of commercial forest land, by forest type and basal-area class, Eastern Ozarks, Missouri, 1972*

(Thousand acres)

Forest type	All classes	Basal-area class (square feet per acre)							
		0-19	20-39	40-59	60-79	80-99	100-119	120-139	140-159
Shortleaf pine	98.2	3.1	6.3	11.5	16.4	17.8	35.7	7.4	--
Eastern redcedar	12.4	7.7	3.0	--	1.7	--	--	--	--
Eastern redcedar-hardwood	20.4	7.9	--	2.7	9.8	--	--	--	--
Shortleaf pine-oak	211.7	--	7.6	67.4	61.1	54.0	14.3	7.3	--
Post-blackjack oak	709.4	26.6	45.8	280.7	232.2	100.7	23.4	--	--
Black-scarlet oak	1,896.0	22.1	117.8	478.4	690.6	433.8	145.4	7.9	--
White oak	836.6	11.6	52.6	223.5	298.6	211.5	38.8	--	--
Oak-gum-cypress	13.7	3.6	--	6.1	--	--	--	--	4.0
Elm-ash-cottonwood	78.5	3.6	--	35.9	9.7	26.0	3.3	--	--
Maple-beech	67.6	9.5	15.6	18.0	16.4	3.6	4.5	--	--
Nonstocked 1/	139.5	31.5	40.5	48.6	18.9	--	--	--	--
All forest types	4,084.0	127.2	289.2	1,172.8	1,355.4	847.4	265.4	22.6	4.0

1/ See glossary for stand-size classes (page 3).

Table 12.--*Area of commercial forest land, by forest type, stand-size, and site class, Eastern Ozarks, Missouri, 1972*

(Thousand acres)

Forest type and stand-size class	All site classes	85 to 120 cu. ft.	50 to 85 cu. ft.	Less than 50 cu. ft.
Shortleaf pine				
Sawtimber	39.5	9.4	22.1	8.0
Poletimber	39.2	3.7	22.4	13.1
Sapling and seedling	19.5	--	5.0	14.5
All stands	98.2	13.1	49.5	35.6
Eastern redcedar				
Sawtimber	3.0	--	--	3.0
Poletimber	1.7	--	--	1.7
Sapling and seedling	7.7	--	--	7.7
All stands	12.4	--	--	12.4
Eastern redcedar-hardwood				
Sawtimber	--	--	--	--
Poletimber	1.7	--	--	1.7
Sapling and seedling	18.7	--	5.4	13.3
All stands	20.4	--	5.4	15.0
Shortleaf pine-oak				
Sawtimber	56.7	--	18.1	38.6
Poletimber	122.6	--	40.0	82.6
Sapling and seedling	32.4	--	12.1	20.3
All stands	211.7	--	70.2	141.5
Post-blackjack oak				
Sawtimber	142.2	--	11.5	130.7
Poletimber	294.4	--	27.6	266.8
Sapling and seedling	272.8	--	22.6	250.2
All stands	709.4	--	61.7	647.7
Black-scarlet oak				
Sawtimber	603.7	42.5	237.3	323.9
Poletimber	962.8	34.9	360.3	567.6
Sapling and seedling	329.5	7.6	89.9	232.0
All stands	1,896.0	85.0	687.5	1,123.5
White oak				
Sawtimber	242.7	15.3	50.4	177.0
Poletimber	484.7	19.5	86.6	378.6
Sapling and seedling	109.2	7.3	22.7	79.2
All stands	836.6	42.1	159.7	634.8
Oak-gum-cypress				
Sawtimber	7.1	4.0	3.1	--
Poletimber	3.6	--	--	3.6
Sapling and seedling	3.0	--	3.0	--
All stands	13.7	4.0	6.1	3.6
Elm-ash-cottonwood				
Sawtimber	37.1	9.3	15.4	12.4
Poletimber	30.5	10.2	13.4	6.9
Sapling and seedling	10.9	--	3.6	7.3
All stands	78.5	19.5	32.4	26.6
Maple-beech				
Sawtimber	13.7	3.0	2.5	8.2
Poletimber	30.1	3.1	10.9	16.1
Sapling and seedling	23.8	3.2	--	20.6
All stands	67.6	9.3	13.4	44.9
Nonstocked 1/	139.5	4.0	12.9	122.6
Total all types	4,084.0	177.0	1,098.8	2,808.2

1/See glossary for stand-size classes (page 3).

Table 13.--*Area of commercial forest land, by stocking class based on selected stand components, Eastern Ozarks, Missouri, 1972*

(Thousand acres)

Stocking percentage	Stocking classified in terms of					
	All trees	Growing-stock trees			Rough and rotten trees	Inhibiting vegetation
		Total	Desirable	Acceptable		
140+	11.0	--	--	--	--	--
130-139	79.8	3.5	--	--	--	--
120-129	321.7	7.4	--	3.7	--	--
110-119	603.4	44.1	--	23.1	--	--
100-109	891.8	99.9	--	48.4	--	--
90-99	901.5	197.1	--	127.2	25.3	--
80-89	686.1	394.5	--	332.8	70.1	--
70-79	347.4	457.0	--	460.0	161.3	--
60-69	161.1	659.2	--	656.7	286.0	--
50-59	61.6	633.9	--	715.3	605.0	--
40-49	3.7	604.6	11.9	646.8	833.6	--
30-39	7.5	489.7	31.6	562.5	780.4	--
20-29	7.4	302.8	66.1	305.6	751.5	--
10-19	--	158.3	201.3	169.9	441.9	--
0-10	--	32.0	3,773.1	32.0	128.9	4,084.0
Total	4,084.0	4,084.0	4,084.0	4,084.0	4,084.0	4,084.0

Table 14.--*Area of commercial forest land, by stocking class of growing-stock trees and stand-size class, Eastern Ozarks, Missouri, 1972*

(Thousand acres)

Stocking percentage	All stands	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas 1/
134 or more	3.5	--	3.5	--	--
101 to 133	151.4	65.8	85.6	--	--
61 to 100	1,707.8	521.0	914.5	272.3	--
18 to 60	2,081.8	558.9	967.7	555.2	--
Less than 17	139.5	--	--	--	139.5
All classes	4,084.0	1,145.7	1,971.3	827.5	139.5

1/ See glossary for stand-size classes (page 3).

Table 15.--*Area of noncommercial forest land, by ownership class, Eastern Ozarks, Missouri, 1972*

(Thousand acres)

Ownership class	All areas	Productive reserved areas	Unproductive areas
National Forest	14.5	--	14.5
Other public	97.3	97.3	--
Forest industry	3.6	--	3.6
Farmer and miscellaneous private	45.2	--	45.2
All ownerships	160.6	97.3	63.3

Table 16.--*Area of noncommercial forest land, by forest type, Eastern Ozarks, Missouri, 1972*

(Thousand acres)

Forest type	All areas	Productive reserved areas	Unproductive areas
Shortleaf pine	.8	.8	--
Eastern redcedar	10.6	.6	10.0
Shortleaf pine-oak	.6	.6	--
Post-blackjack oak	39.6	18.6	21.0
Black-scarlet oak	82.1	49.8	32.3
White oak	22.0	22.0	--
Elm-ash-cottonwood	4.9	4.9	--
All forest types	160.6	97.3	63.3

Table 17.--*Number of all live trees on commercial forest land, by species and diameter class, Eastern Ozarks, Missouri, 1972*

(Thousand trees)

Species	All Classes	Diameter class (inches at breast height) 1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-28.9	29.0-38.9	39.0+
Softwoods:															
Shortleaf pine	121,549	52,260	28,235	17,179	12,095	6,972	3,478	892	291	105	42	--	--	--	--
Eastern redcedar	22,391	15,153	4,651	1,470	732	236	90	12	42	--	5	--	--	--	--
Total softwoods	143,940	67,413	32,886	18,649	12,827	7,208	3,568	904	333	105	47	--	--	--	--
Hardwoods:															
Select white oaks	453,594	267,635	84,517	43,464	24,920	14,956	8,454	5,205	2,348	1,027	490	223	311	44	--
Other white oaks	290,130	170,690	61,416	24,525	13,680	8,795	5,541	2,972	1,310	610	325	166	89	11	--
Select red oaks	32,327	16,897	5,923	3,009	2,236	1,595	1,071	617	478	226	135	55	75	10	--
Red oaks	595,831	319,763	121,216	55,608	37,755	28,555	17,455	8,329	3,926	1,605	775	397	388	58	1
Other red oaks	88,035	58,753	12,431	5,985	4,577	3,066	1,554	882	462	220	56	29	18	2	--
Hickory A	183,650	132,787	28,979	10,080	5,793	3,307	1,736	618	184	103	38	12	13	--	--
Hickory B	342,730	266,143	44,311	15,860	7,703	4,830	2,372	913	444	122	28	--	4	--	--
Hard maple	20,239	14,800	3,238	670	464	446	254	141	108	21	35	39	23	--	--
Soft maple	50,186	45,442	3,097	1,161	282	87	70	--	18	7	6	9	7	--	--
Beech	360	360	--	--	--	--	--	--	--	--	--	--	--	--	--
Sweetgum	4,296	1,861	1,638	257	212	213	76	28	--	--	7	--	4	--	--
Tupelo and blackgum	77,453	65,340	6,907	2,685	693	483	534	353	228	138	41	23	22	6	--
Ash	21,896	15,018	3,145	1,774	825	614	244	197	9	57	7	6	--	--	--
Sycamore	5,170	1,677	936	772	581	484	335	138	127	53	28	16	10	7	6
Cottonwood	115	--	--	53	--	--	16	11	24	--	11	--	--	--	--
River birch	1,036	--	385	249	140	106	57	54	26	7	--	9	3	--	--
Basswood	52	--	--	--	--	29	23	--	--	--	--	--	--	--	--
Black walnut	10,690	3,957	2,259	2,121	1,143	706	344	96	21	26	13	--	4	--	--
Black cherry	4,943	3,352	1,153	164	207	--	32	29	6	--	--	--	--	--	--
Elm	65,176	46,113	11,179	3,791	2,358	776	454	260	155	12	48	12	14	4	--
Other hardwoods	362,765	333,295	24,972	2,313	962	635	378	104	48	24	20	9	5	--	--
Noncommercial species	73,765	68,010	4,763	786	130	49	20	--	--	7	--	--	--	--	--
Total hardwoods	2,684,439	1,831,893	422,465	175,327	104,661	69,732	41,020	20,947	9,922	4,265	2,063	1,005	990	142	7
All species	2,828,379	1,899,306	455,351	193,976	117,488	76,940	44,588	21,851	10,255	4,370	2,110	1,005	990	142	7

Table 18.--*Number of growing-stock trees on commercial forest land, by species and diameter class, Eastern Ozarks, Missouri, 1972*

(Thousand trees)

Species	All Classes	Diameter class (inches at breast height) 1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-28.9	29.0-38.9	39.0+
Softwoods:															
Shortleaf pine	93,902	33,390	21,198	15,876	11,792	6,923	3,435	865	291	96	36	--	--	--	--
Eastern redcedar	17,809	12,209	3,608	1,166	510	199	72	12	33	--	--	--	--	--	--
Total softwoods	111,711	45,599	24,806	17,042	12,302	7,122	3,507	877	324	96	36	--	--	--	--
Hardwoods:															
Select white oaks	255,201	112,992	65,363	34,915	19,226	11,309	5,862	3,463	1,336	420	160	83	56	16	--
Other white oaks	139,864	68,409	36,363	16,819	8,830	4,865	2,698	1,249	478	120	14	11	8	--	--
Select red oaks	23,462	11,512	5,021	2,553	1,531	1,214	631	441	302	127	65	22	41	2	--
Red oaks	363,732	162,586	89,087	40,995	27,038	21,132	12,778	6,133	2,647	790	355	85	94	11	1
Other red oaks	20,740	9,570	4,962	2,433	1,428	1,345	469	293	154	50	22	6	8	--	--
Hickory A	77,729	44,143	18,654	7,028	4,128	2,050	1,144	404	85	69	18	6	--	--	--
Hickory B	135,965	87,474	28,123	10,028	5,083	2,952	1,331	627	278	51	14	--	4	--	--
Hard maple	10,692	8,385	1,549	215	198	173	98	37	24	1	--	9	3	--	--
Soft maple	12,192	10,945	493	573	105	22	16	--	18	7	--	9	4	--	--
Sweetgum	1,272	300	494	84	136	188	57	13	--	--	--	--	--	--	--
Tupelo and blackgum	18,696	13,406	2,926	1,198	380	200	286	133	120	32	--	6	9	--	--
Ash	5,596	3,129	824	671	440	300	76	124	9	23	--	--	--	--	--
Sycamore	3,574	673	818	614	453	422	283	123	100	47	28	5	7	1	--
Cottonwood	115	--	--	54	--	--	16	11	24	--	10	--	--	--	--
River birch	829	--	386	131	103	84	43	54	9	7	--	9	3	--	--
Black walnut	4,131	729	636	1,379	763	361	187	42	10	17	7	--	--	--	--
Black cherry	818	305	305	79	68	--	32	29	--	--	--	--	--	--	--
Elm	15,072	8,063	2,856	2,016	1,181	465	282	126	58	5	14	6	--	--	--
Other hardwoods	37,752	32,737	3,687	430	355	327	107	54	21	14	15	--	5	--	--
Total hardwoods	1,127,432	575,358	262,547	122,215	71,446	47,409	26,396	13,356	5,673	1,780	722	257	242	30	1
All species	1,239,143	620,957	287,353	139,257	83,748	54,531	29,903	14,233	5,997	1,876	758	257	242	30	1

Table 19.--*Number of short-log trees on commercial forest land, by species and diameter class, Eastern Ozarks, Missouri, 1972*

(Thousand trees)

Species	All classes	Diameter class (inches at breast height)									
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-28.9	29.0-38.9	39.0+
Softwoods:											
Shortleaf pine	30	--	21	--	--	9	--	--	--	--	--
Total softwoods	30	--	21	--	--	9	--	--	--	--	--
Hardwoods:											
Select white oaks	2,295	--	1,060	723	280	125	42	29	33	3	--
Other white oaks	1,340	--	632	417	217	51	13	6	4	--	--
Select red oaks	179	--	74	40	62	--	--	--	--	3	--
Red oaks	2,081	--	1,145	502	206	110	58	38	15	7	--
Other red oaks	320	--	231	14	36	33	6	--	--	--	--
Hickory A	316	--	202	52	34	9	14	--	5	--	--
Hickory B	557	--	404	94	52	7	--	--	--	--	--
Hard maple	100	--	30	40	26	--	--	4	--	--	--
Soft maple	17	--	17	--	--	--	--	--	--	--	--
Sweetgum	14	--	--	14	--	--	--	--	--	--	--
Tupelo and blackgum	158	--	74	41	12	25	--	6	--	--	--
Ash	123	--	71	43	--	9	--	--	--	--	--
Sycamore	39	--	35	--	--	--	--	--	--	--	4
River birch	22	--	14	--	8	--	--	--	--	--	--
Black walnut	100	--	73	16	11	--	--	--	--	--	--
Elm	134	--	42	43	49	--	--	--	--	--	--
Other hardwoods	37	--	17	12	8	--	--	--	--	--	--
Total hardwoods	7,832	--	4,121	2,051	1,001	369	133	83	57	13	4
All species	7,862	--	4,142	2,051	1,001	378	133	83	57	13	4

Table 20.--*Net volume of growing stock and sawtimber on commercial forest land, by species, Eastern Ozarks, Missouri, 1959 and 1972*

Species	Growing stock		Sawtimber	
	1959[1/]	1972	1959[1/]	1972
	Million cubic feet		Million board feet[2/]	
Softwoods:				
Shortleaf pine	157.8	245.2	418.8	818.4
Cypress	2.5	--	16.0	--
Eastern redcedar	3.7	8.6	6.9	20.3
Total softwoods	164.0	253.8	441.7	838.7
Hardwoods:				
Select white oaks	394.9	500.4	722.1	1,005.1
Other white oaks	191.4	179.3	378.7	326.9
Select red oaks	67.8	66.4	153.6	179.8
Red oaks	580.2	861.0	1,147.6	2,168.8
Other red oaks	46.4	42.0	149.1	115.8
Hickory A	94.1	84.5	175.5	159.6
Hickory B	74.3	108.6	133.3	205.1
Hard maple	8.5	5.8	20.2	14.2
Soft maple	3.6	3.8	4.3	9.6
Sweetgum	5.0	3.5	7.8	4.3
Tupelo and blackgum	12.5	16.3	41.5	52.7
Ash	7.8	10.2	12.7	21.6
Sycamore	12.9	23.4	21.5	69.4
Cottonwood	5.0	2.2	23.9	9.7
River birch	1.4	5.3	2.1	17.2
Black walnut	8.8	14.7	4.3	22.7
Black cherry	1.4	1.6	7.1	4.9
Elm	15.3	22.1	17.1	37.3
Other hardwoods	7.3	10.7	15.6	23.1
Total hardwoods	1,538.6	1,961.8	3,038.0	4,447.8
All species	1,702.6	2,215.6	3,479.7	5,286.5

1/ Figures have been adjusted from those published previously for 1959 to conform to 1972 volumes because of changes in survey definitions and procedures.

2/ International 1/4-inch rule.

Table 21.--*Net volume on commercial forest land for Missouri's Eastern Ozarks Survey Unit and for individual counties within Unit, by species and kind of material, 1972*

ALL COUNTIES

Species	Growing stock			Sawtimber			Rough and rotten trees
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	Other stands	
	Thousand cords			Million board feet[1]			Thousand cords
Softwoods:							
Shortleaf pine	3,103.3	1,248.1	1,855.2	818.4	416.6	401.8	64.0
Eastern redcedar	109.0	61.5	47.5	20.3	10.6	9.7	24.4
Total softwoods	3,212.3	1,309.6	1,902.7	838.7	427.2	411.5	88.4
Hardwoods:							
Select white oaks	6,333.9	3,838.2	2,495.7	1,005.1	564.5	440.6	2,141.7
Other white oaks	2,270.1	1,456.9	813.2	326.9	202.1	124.8	1,522.9
Select red oaks	840.6	369.5	471.1	179.8	115.2	64.6	201.8
Red oaks	10,898.4	5,403.4	5,495.0	2,168.8	1,295.2	873.6	3,115.8
Other red oaks	531.5	267.5	264.0	115.8	81.5	34.3	614.3
Hickory A	1,068.9	657.6	411.3	159.6	90.5	69.1	380.7
Hickory B	1,374.6	867.1	507.5	205.1	94.8	110.3	580.4
Hard maple	73.8	36.4	37.4	14.2	10.4	3.8	129.7
Soft maple	47.7	23.8	23.9	9.6	9.6	--	45.3
Sweetgum	44.5	32.8	11.7	4.3	2.7	1.6	15.2
Tupelo and blackgum	206.8	71.8	135.0	52.7	36.0	16.7	135.7
Ash	129.4	72.2	57.2	21.6	18.7	2.9	118.1
Sycamore	296.5	93.9	202.6	69.4	49.5	19.9	52.9
Cottonwood	27.4	2.4	25.0	9.7	9.7	--	--
River birch	67.0	23.8	43.2	17.2	11.3	5.9	15.0
Basswood	--	--	--	--	--	--	2.1
Black walnut	186.5	121.8	64.7	22.7	17.5	5.2	97.0
Black cherry	19.8	4.9	14.9	4.9	1.7	3.2	9.7
Elm	280.3	173.8	106.5	37.3	22.8	14.5	224.3
Other hardwoods	135.6	70.0	65.6	23.1	17.7	5.4	170.2
Noncommercial species	--	--	--	--	--	--	41.8
Total hardwoods	24,833.3	13,587.8	11,245.5	4,447.8	2,651.4	1,796.4	9,614.6
All species	28,045.6	14,897.4	13,148.2	5,286.5	3,078.6	2,207.9	9,703.0

BOLLINGER COUNTY

Softwoods:							
Shortleaf pine	108.4	42.5	65.9	29.0	14.8	14.2	2.3
Eastern redcedar	5.9	3.0	2.9	1.3	.8	.5	1.2
Total softwoods	114.3	45.5	68.8	30.3	15.6	14.7	3.5
Hardwoods:							
Select white oaks	321.7	184.3	137.4	55.0	35.6	19.4	112.2
Other white oaks	111.7	69.4	42.3	17.0	11.6	5.4	75.4
Select red oaks	43.3	17.6	25.7	9.8	7.0	2.8	11.1
Red oaks	532.6	247.4	285.2	112.4	74.2	38.2	155.9
Other red oaks	40.6	14.8	25.8	11.4	9.9	1.5	34.0
Hickory A	56.4	32.9	23.5	9.0	5.8	3.2	19.6
Hickory B	68.3	41.9	26.4	10.7	5.8	4.9	29.2
Hard maple	7.0	3.5	3.5	1.3	1.1	.2	9.1
Soft maple	3.4	1.3	2.1	.8	.8	--	2.9
Sweetgum	3.4	2.4	1.0	.4	.3	.1	1.0
Tupelo and blackgum	10.8	3.4	7.4	2.9	2.2	.7	7.3
Ash	8.5	4.6	3.9	1.5	1.4	.1	7.0
Sycamore	21.0	5.6	15.4	5.2	4.2	1.0	3.4
Cottonwood	2.4	.2	2.2	.8	.8	--	--
River birch	4.6	1.5	3.1	1.2	.8	.4	.9
Basswood	--	--	--	--	--	--	.1
Black walnut	10.1	6.3	3.8	1.3	1.1	.2	5.2
Black cherry	1.1	.3	.8	.3	.1	.2	.5
Elm	16.4	9.2	7.2	2.6	1.8	.8	13.8
Other hardwoods	9.4	4.3	5.1	1.8	1.5	.3	10.9
Noncommercial species	--	--	--	--	--	--	2.3
Total hardwoods	1,272.7	650.9	621.8	245.4	166.0	79.4	501.8
All species	1,387.0	696.4	690.6	275.7	181.6	94.1	505.3

1/ International 1/4-inch rule.

(Table 21 cont. on next page)

(Table 21 cont.)

BUTLER COUNTY

Species	Growing stock			Sawtimber			Rough and rotten trees
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	Other stands	
	Thousand cords			Million board feet[1]			Thousand cords
Softwoods:							
Shortleaf pine	174.1	66.2	107.9	47.1	29.6	17.5	4.0
Eastern redcedar	7.0	3.9	3.1	1.4	.8	.6	1.3
Total softwoods	181.1	70.1	111.0	48.5	30.4	18.1	5.3
Hardwoods							
Select white oaks	240.8	143.5	97.3	39.2	23.1	16.1	79.6
Other white oaks	82.8	54.0	28.8	11.6	7.1	4.5	57.9
Select red oaks	30.0	12.9	17.1	6.5	4.2	2.3	8.2
Red oaks	396.1	200.2	195.9	77.2	45.2	32.0	111.2
Other red oaks	105.1	22.7	82.4	36.9	35.6	1.3	45.8
Hickory A	44.4	23.8	20.6	7.7	5.0	2.7	14.1
Hickory B	51.2	33.1	18.1	7.3	3.3	4.0	20.7
Hard maple	4.7	2.0	2.7	1.0	.8	.2	7.4
Soft maple	5.0	1.4	3.6	1.5	1.5	--	3.0
Sweetgum	9.0	6.1	2.9	1.0	.9	.1	2.2
Tupelo and blackgum	8.7	3.0	5.7	2.2	1.6	.6	4.6
Ash	12.9	7.8	5.1	1.9	1.8	.1	8.6
Sycamore	32.2	7.8	24.4	8.4	7.0	1.4	4.7
Cottonwood	4.3	.4	3.9	1.5	1.5	--	--
River birch	8.8	2.9	5.9	2.4	1.5	.9	1.7
Black walnut	8.1	5.4	2.7	.9	.7	.2	5.3
Black cherry	.9	.3	.6	.2	.1	.1	.4
Elm	17.3	9.9	7.4	2.8	1.3	1.5	19.2
Other hardwoods	14.2	6.0	8.2	2.8	2.6	.2	15.2
Noncommercial species	--	--	--	--	--	--	2.1
Total hardwoods	1,076.5	543.2	533.3	213.0	144.8	68.2	411.9
All species	1,257.6	613.3	644.3	261.5	175.2	86.3	417.2

CARTER COUNTY

Softwoods:							
Shortleaf pine	226.2	91.3	134.9	59.5	30.8	28.7	4.6
Eastern redcedar	5.4	3.1	2.3	1.0	.5	.5	1.3
Total softwoods	231.6	94.4	137.2	60.5	31.3	29.2	5.9
Hardwoods:							
Select white oaks	377.0	229.2	147.8	59.6	32.5	27.1	131.8
Other white oaks	138.7	89.0	49.7	20.0	12.2	7.8	94.1
Select red oaks	50.5	22.6	27.9	10.6	6.7	3.9	12.4
Red oaks	658.6	328.5	330.1	130.3	77.3	53.0	194.0
Other red oaks	23.7	15.2	8.5	3.7	1.5	2.2	35.0
Hickory A	63.4	39.6	23.8	9.3	5.2	4.1	23.4
Hickory B	82.9	52.4	30.5	12.3	5.6	6.7	36.3
Hard maple	2.8	1.5	1.3	.5	.3	.2	6.1
Soft maple	1.9	1.3	.6	.2	.2	--	2.2
Sweetgum	1.9	1.5	.4	.2	.1	.1	.9
Tupelo and blackgum	12.4	4.4	8.0	3.1	2.1	1.0	8.3
Ash	5.8	3.4	2.4	.9	.7	.2	5.9
Sycamore	11.3	4.4	6.9	2.4	1.4	1.0	2.0
Cottonwood	.8	.1	.7	.3	.3	--	--
River birch	.7	.4	.3	.1	--	.1	.4
Basswood	--	--	--	--	--	--	.1
Black walnut	10.6	7.0	3.6	1.3	1.0	.3	5.2
Black cherry	1.1	.3	.8	.3	.1	.2	.6
Elm	15.1	9.8	5.3	1.9	1.1	.8	10.4
Other hardwoods	4.4	2.9	1.5	.5	.2	.3	7.7
Noncommercial species	--	--	--	--	--	--	2.1
Total hardwoods	1,463.6	813.5	650.1	257.5	148.5	109.0	578.9
All species	1,695.2	907.9	787.3	318.0	179.8	138.2	584.8

1/ International 1/4-inch rule.

(Table 21 cont. on next page)

(Table 21 cont.)

CRAWFORD COUNTY

Species	Growing stock			Sawtimber			Rough and rotten trees
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	Other stands	
	Thousand cords			Million board feet[1]			Thousand cords
Softwoods:							
Shortleaf pine	169.7	68.3	101.4	44.9	20.3	24.6	3.5
Eastern redcedar	8.4	4.2	4.2	1.9	1.2	.7	1.6
Total softwoods	178.1	72.5	105.6	46.8	21.5	25.3	5.1
Hardwoods:							
Select white oaks	514.4	309.7	204.7	82.2	47.4	34.8	174.0
Other white oaks	182.3	116.6	65.7	26.3	16.8	9.5	120.5
Select red oaks	69.6	29.9	39.7	15.1	9.9	5.2	16.6
Red oaks	881.3	429.2	452.1	178.4	108.6	69.8	249.2
Other red oaks	30.8	19.3	11.5	5.0	2.3	2.7	46.1
Hickory A	87.5	54.0	33.5	13.0	7.4	5.6	31.0
Hickory B	111.0	69.7	41.3	16.7	7.9	8.8	46.0
Hard maple	5.8	2.9	2.9	1.1	.9	.2	10.6
Soft maple	5.2	2.1	3.1	1.2	1.2	--	4.4
Sweetgum	2.8	2.1	.7	.3	.1	.2	1.1
Tupelo and blackgum	16.4	5.6	10.8	4.2	2.9	1.3	11.3
Ash	11.4	5.5	5.9	2.2	2.0	.2	10.4
Sycamore	31.5	9.2	22.3	7.6	5.8	1.8	5.4
Cottonwood	3.4	.3	3.1	1.2	1.2	--	--
River birch	9.5	3.3	6.2	2.5	1.8	.7	1.7
Basswood	--	--	--	--	--	--	.2
Black walnut	15.3	10.0	5.3	1.9	1.5	.4	8.2
Black cherry	1.7	.4	1.3	.4	.1	.3	.7
Elm	22.8	13.7	9.1	3.2	2.1	1.1	19.9
Other hardwoods	15.0	7.1	7.9	2.8	2.4	.4	16.7
Noncommercial species	--	--	--	--	--	--	3.7
Total hardwoods	2,017.7	1,090.6	927.1	365.3	222.3	143.0	777.7
All species	2,195.8	1,163.1	1,032.7	412.1	243.8	168.3	782.8

DENT COUNTY

Softwoods:							
Shortleaf pine	196.5	78.6	117.9	52.2	24.5	27.7	4.1
Eastern redcedar	5.2	3.0	2.2	1.0	.5	.5	1.5
Total softwoods	201.7	81.6	120.1	53.2	25.0	28.2	5.6
Hardwoods:							
Select white oaks	478.1	297.6	180.5	72.8	37.6	35.2	159.1
Other white oaks	176.3	115.2	61.1	24.5	14.5	10.0	119.4
Select red oaks	63.2	28.5	34.7	13.2	8.0	5.2	14.5
Red oaks	838.8	424.9	413.9	163.5	92.4	71.1	237.2
Other red oaks	29.6	19.1	10.5	4.5	1.7	2.8	45.3
Hickory A	79.8	50.6	29.2	11.4	5.9	5.5	29.0
Hickory B	106.0	67.3	38.7	15.6	6.6	9.0	43.8
Hard maple	4.0	2.0	2.0	.8	.5	.3	8.1
Soft maple	2.3	1.6	.7	.3	.3	--	2.8
Sweetgum	2.3	1.7	.6	.2	.1	.1	.9
Tupelo and blackgum	14.9	5.3	9.6	3.8	2.4	1.4	10.1
Ash	7.3	4.4	2.9	1.1	.9	.2	7.3
Sycamore	14.5	5.4	9.1	3.2	1.8	1.4	3.1
Cottonwood	.9	.1	.8	.3	.3	--	--
River birch	1.7	.8	.9	.4	.2	.2	.6
Basswood	--	--	--	--	--	--	.2
Black walnut	13.7	9.1	4.6	1.6	1.2	.4	7.2
Black cherry	1.4	.3	1.1	.4	.2	.2	.8
Elm	19.0	12.4	6.6	2.3	1.3	1.0	14.3
Other hardwoods	6.4	4.0	2.4	.9	.4	.5	9.5
Noncommercial species	--	--	--	--	--	--	2.9
Total hardwoods	1,860.2	1,050.3	809.9	320.8	176.3	144.5	716.1
All species	2,061.9	1,131.9	930.0	374.0	201.3	172.7	721.7

1/ International 1/4-inch rule.

(Table 21 cont. on next page)

(Table 21 cont.)

IRON COUNTY

Species	Growing stock			Sawtimber			Rough and rotten trees
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	Other stands	
	Thousand cords			Million board feet[1]			Thousand cords
Softwoods:							
Shortleaf pine	191.7	83.0	108.7	48.2	19.7	28.5	3.5
Eastern redcedar	7.1	4.2	2.9	1.2	.5	.7	1.4
Total softwoods	198.8	87.2	111.6	49.4	20.2	29.2	4.9
Hardwoods:							
Select white oaks	469.2	290.8	178.4	72.0	38.5	33.5	150.3
Other white oaks	165.7	107.7	58.0	23.3	13.9	9.4	106.1
Select red oaks	62.1	27.7	34.4	13.1	8.1	5.0	13.9
Red oaks	816.5	411.2	405.3	160.0	92.5	67.5	222.6
Other red oaks	27.9	18.0	9.9	4.2	1.7	2.5	40.3
Hickory A	76.9	48.4	28.5	11.2	6.0	5.2	26.3
Hickory B	100.4	63.6	36.8	14.9	6.6	8.3	41.1
Hard maple	4.4	2.3	2.1	.8	.6	.2	8.1
Soft maple	2.6	1.6	1.0	.4	.4	--	2.8
Sweetgum	2.1	1.6	.5	.2	.1	.1	.7
Tupelo and blackgum	14.6	5.2	9.4	3.7	2.4	1.3	10.0
Ash	7.7	4.4	3.3	1.3	1.1	.2	7.5
Sycamore	15.9	5.6	10.3	3.5	2.3	1.2	3.0
Cottonwood	1.1	.1	1.0	.4	.4	--	--
River birch	3.8	1.4	2.4	1.0	.6	.4	.9
Basswood	--	--	--	--	--	--	.2
Black walnut	13.3	8.8	4.5	1.6	1.2	.4	6.6
Black cherry	1.4	.3	1.1	.4	.1	.3	.6
Elm	17.8	11.1	6.7	2.3	1.5	.8	13.5
Other hardwoods	7.2	4.0	3.2	1.1	.8	.3	10.0
Noncommercial species	--	--	--	--	--	--	2.8
Total hardwoods	1,810.6	1,013.8	796.8	315.4	178.8	136.6	667.3
All species	2,009.4	1,101.0	908.4	364.8	199.0	165.8	672.2

MADISON COUNTY

Softwoods:							
Shortleaf pine	227.6	98.4	129.2	57.1	27.4	29.7	4.2
Eastern redcedar	8.2	5.0	3.2	1.3	.6	.7	1.5
Total softwoods	235.8	103.4	132.4	58.4	28.0	30.4	5.7
Hardwoods:							
Select white oaks	353.8	215.9	137.9	55.6	30.6	25.0	116.9
Other white oaks	123.5	78.9	44.6	18.0	11.2	6.8	80.6
Select red oaks	46.4	20.9	25.5	9.7	6.0	3.7	11.0
Red oaks	612.7	309.6	303.1	119.7	70.6	49.1	172.5
Other red oaks	21.5	14.0	7.5	3.2	1.4	1.8	30.5
Hickory A	58.3	36.0	22.3	8.7	4.9	3.8	20.4
Hickory B	75.1	47.5	27.6	11.1	5.2	5.9	32.1
Hard maple	6.3	2.8	3.5	1.3	1.1	.2	9.1
Soft maple	2.9	1.4	1.5	.6	.6	--	2.8
Sweetgum	1.7	1.3	.4	.2	.1	.1	.7
Tupelo and blackgum	11.8	4.1	7.7	3.0	2.1	.9	7.2
Ash	7.3	3.8	3.5	1.3	1.2	.1	6.9
Sycamore	18.5	5.5	13.0	4.4	3.4	1.0	3.6
Cottonwood	1.6	.1	1.5	.6	.6	--	--
River birch	6.2	2.0	4.2	1.7	1.2	.5	1.1
Basswood	--	--	--	--	--	--	.1
Black walnut	10.6	7.0	3.6	1.2	1.0	.2	5.4
Black cherry	1.1	.3	.8	.3	.1	.2	.4
Elm	16.4	9.7	6.7	2.3	1.6	.7	12.7
Other hardwoods	9.6	4.1	5.5	1.9	1.6	.3	10.2
Noncommercial species	--	--	--	--	--	--	2.6
Total hardwoods	1,385.3	764.9	620.4	244.8	144.5	100.3	526.8
All species	1,621.1	868.3	752.8	303.2	172.5	130.7	532.5

1/ International 1/4-inch rule.

(Table 21 cont. on next page)

(Table 21 cont.)

OREGON COUNTY

Species	Growing stock			Sawtimber			Rough and rotten trees
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	Other stands	
	Thousand cords			Million board feet[1]			Thousand cords
Softwoods:							
Shortleaf pine	236.3	92.8	143.5	63.3	33.6	29.7	5.3
Eastern redcedar	7.3	3.5	3.8	1.7	1.2	.5	2.0
Total softwoods	243.6	96.3	147.3	65.0	34.8	30.2	7.3
Hardwoods:							
Select white oaks	442.0	263.3	178.7	72.0	40.8	31.2	165.2
Other white oaks	170.2	107.7	62.5	25.0	15.7	9.3	123.6
Select red oaks	59.8	26.2	33.6	12.8	8.4	4.4	15.7
Red oaks	771.2	379.0	392.2	155.0	93.9	61.1	242.1
Other red oaks	29.0	18.3	10.7	4.5	1.9	2.6	46.9
Hickory A	77.1	47.6	29.5	11.5	6.6	4.9	30.4
Hickory B	99.9	62.3	37.6	15.2	7.1	8.1	45.5
Hard maple	3.9	1.9	2.0	.7	.4	.3	8.5
Soft maple	3.0	1.7	1.3	.5	.5	--	3.0
Sweetgum	2.3	1.8	.5	.2	.1	.1	.9
Tupelo and blackgum	14.6	5.0	9.6	3.8	2.5	1.3	10.2
Ash	8.0	4.3	3.7	1.4	1.1	.3	7.8
Sycamore	17.7	5.8	11.9	4.1	2.8	1.3	3.2
Cottonwood	1.6	.1	1.5	.6	.6	--	--
River birch	2.4	.9	1.5	.6	.4	.2	.7
Basswood	--	--	--	--	--	--	.2
Black walnut	13.0	8.5	4.5	1.6	1.2	.4	6.8
Black cherry	1.3	.4	.9	.3	.1	.2	.8
Elm	19.4	12.4	7.0	2.5	1.5	1.0	14.6
Other hardwoods	8.0	4.6	3.4	1.2	.8	.4	11.4
Noncommercial species	--	--	--	--	--	--	2.7
Total hardwoods	1,744.4	951.8	792.6	313.5	186.4	127.1	740.2
All species	1,988.0	1,048.1	939.9	378.5	221.2	157.3	747.5

REYNOLDS COUNTY

Softwoods:							
Shortleaf pine	285.4	115.7	169.7	75.2	35.4	39.8	5.6
Eastern redcedar	10.5	5.9	4.6	2.0	1.0	1.0	2.1
Total softwoods	295.9	121.6	174.3	77.2	36.4	40.8	7.7
Hardwoods:							
Select white oaks	700.7	425.5	275.2	110.7	63.0	47.7	227.6
Other white oaks	244.0	155.9	88.1	35.4	22.4	13.0	156.4
Select red oaks	93.4	40.7	52.7	20.2	13.0	7.2	21.4
Red oaks	1,201.2	590.4	610.8	241.0	145.7	95.3	330.4
Other red oaks	44.2	26.4	17.8	7.7	4.2	3.5	60.0
Hickory A	116.2	72.0	44.2	17.2	9.8	7.4	39.7
Hickory B	149.1	93.8	55.3	22.3	10.6	11.7	61.1
Hard maple	7.9	3.9	4.0	1.5	1.2	.3	13.7
Soft maple	4.4	2.4	2.0	.8	.8	--	4.8
Sweetgum	3.7	2.7	1.0	.3	.2	.1	1.4
Tupelo and blackgum	22.6	7.8	14.8	5.8	4.0	1.8	14.9
Ash	12.5	6.9	5.6	2.1	1.8	.3	11.9
Sycamore	27.5	9.2	18.3	6.2	4.3	1.9	5.1
Cottonwood	2.2	.2	2.0	.8	.8	--	--
River birch	6.5	2.3	4.2	1.7	1.2	.5	1.4
Basswood	--	--	--	--	--	--	.2
Black walnut	20.4	13.2	7.2	2.5	2.0	.5	10.0
Black cherry	2.2	.5	1.7	.6	.2	.4	.9
Elm	29.1	17.7	11.4	3.9	2.5	1.4	21.7
Other hardwoods	12.8	6.6	6.2	2.2	1.7	.5	16.2
Noncommercial species	--	--	--	--	--	--	4.5
Total hardwoods	2,700.6	1,478.1	1,222.5	482.9	289.4	193.5	1,003.3
All species	2,996.5	1,599.7	1,396.8	560.1	325.8	234.3	1,011.0

1/ International 1/4-inch rule.

(Table 21 cont. on next page)

(Table 21 cont.)

RIPLEY COUNTY

Species	Growing stock			Sawtimber			Rough and rotten trees
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	Other stands	
	Thousand cords			Million board feet 1/			Thousand cords
Softwoods:							
Shortleaf pine	265.6	104.9	160.7	70.4	39.9	30.5	5.7
Eastern redcedar	6.8	4.0	2.8	1.2	.7	.5	1.5
Total softwoods	272.4	108.9	163.5	71.6	40.6	31.0	7.2
Hardwoods:							
Select white oaks	395.6	241.9	153.7	61.9	33.5	28.4	137.7
Other white oaks	144.1	93.6	50.5	20.3	12.1	8.2	99.4
Select red oaks	52.1	23.4	28.7	10.9	6.8	4.1	12.9
Red oaks	684.0	345.2	338.8	133.7	78.0	55.7	200.1
Other red oaks	32.8	17.3	15.5	6.7	4.5	2.2	40.2
Hickory A	66.6	41.2	25.4	9.8	5.4	4.4	24.6
Hickory B	87.8	56.2	31.6	12.8	5.6	7.2	37.8
Hard maple	4.7	2.2	2.5	1.0	.7	.3	8.6
Soft maple	3.8	1.6	2.2	.9	.9	--	3.2
Sweetgum	3.0	2.3	.7	.3	.2	.1	1.0
Tupelo and blackgum	13.4	4.8	8.6	3.4	2.3	1.1	8.3
Ash	9.3	5.0	4.3	1.6	1.4	.2	8.2
Sycamore	24.5	7.5	17.0	5.9	4.2	1.7	4.3
Cottonwood	2.4	.2	2.2	.9	.9	--	--
River birch	7.3	2.5	4.8	1.9	1.3	.6	1.4
Basswood	--	--	--	--	--	--	.1
Black walnut	11.8	7.8	4.0	1.4	1.0	.4	6.5
Black cherry	1.3	.3	1.0	.3	.1	.2	.8
Elm	19.6	12.5	7.1	2.5	1.5	1.0	16.7
Other hardwoods	12.1	5.9	6.2	2.2	1.8	.4	13.4
Noncommercial species	--	--	--	--	--	--	3.0
Total hardwoods	1,576.2	871.4	704.8	278.4	162.2	116.2	628.2
All species	1,848.6	980.3	868.3	350.0	202.8	147.2	635.4
ST. FRANCOIS COUNTY							
Softwoods:							
Shortleaf pine	70.9	30.0	40.9	18.2	6.8	11.4	1.5
Eastern redcedar	6.5	4.0	2.5	1.0	.3	.7	1.8
Total softwoods	77.4	34.0	43.4	19.2	7.1	12.1	3.3
Hardwoods:							
Select white oaks	193.6	118.0	75.6	30.4	16.3	14.1	72.5
Other white oaks	75.5	48.6	26.9	10.8	6.4	4.4	55.2
Select red oaks	26.8	12.1	14.7	5.6	3.6	2.0	6.6
Red oaks	338.5	168.3	170.2	67.2	39.4	27.8	104.4
Other red oaks	13.4	8.5	4.9	2.1	.8	1.3	21.2
Hickory A	34.5	21.4	13.1	5.1	2.7	2.4	14.1
Hickory B	44.4	28.0	16.4	6.6	2.8	3.8	20.1
Hard maple	2.5	1.2	1.3	.5	.3	.2	5.2
Soft maple	2.1	.8	1.3	.5	.5	--	1.7
Sweetgum	1.4	1.1	.3	.1	--	.1	.6
Tupelo and blackgum	5.9	2.1	3.8	1.5	1.0	.5	4.4
Ash	5.3	2.8	2.5	.9	.8	.1	5.0
Sycamore	13.8	4.3	9.5	3.3	2.3	1.0	2.5
Cottonwood	1.4	.1	1.3	.5	.5	--	--
River birch	3.7	1.3	2.4	.9	.7	.2	.8
Basswood	--	--	--	--	--	--	.1
Black walnut	6.1	4.1	2.0	.7	.5	.2	3.8
Black cherry	.7	.2	.5	.2	.1	.1	.5
Elm	10.2	6.5	3.7	1.3	.7	.6	9.9
Other hardwoods	6.6	3.4	3.2	1.2	.9	.3	7.7
Noncommercial species	--	--	--	--	--	--	1.7
Total hardwoods	786.4	432.8	353.6	139.4	80.3	59.1	338.0
All species	863.8	466.8	397.0	158.6	87.4	71.2	341.3

1/ International 1/4-inch rule.

(Table 21 cont. on next page)

(Table 21 cont.)

Species	Growing stock			Sawtimber			Rough and rotten trees
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	Other stands	
	Thousand cords			Million board feet[1]			Thousand cords
SHANNON COUNTY							
Softwoods:							
Shortleaf pine	337.8	136.8	201.0	89.1	42.1	47.0	6.8
Eastern redcedar	9.0	5.1	3.9	1.6	.9	.7	2.5
Total softwoods	346.8	141.9	204.9	90.7	43.0	47.7	9.3
Hardwoods:							
Select white oaks	724.8	443.0	281.8	113.9	61.2	52.7	248.5
Other white oaks	268.1	174.3	93.8	37.8	22.1	15.7	181.7
Select red oaks	96.2	42.6	53.6	20.5	12.7	7.8	22.6
Red oaks	1,270.5	638.6	631.9	249.6	144.3	105.3	365.7
Other red oaks	45.4	29.0	16.4	7.2	2.8	4.4	68.7
Hickory A	121.9	76.4	45.5	17.7	9.5	8.2	44.3
Hickory B	160.1	101.1	59.0	23.9	10.4	13.5	67.8
Hard maple	5.4	2.9	2.5	1.0	.6	.4	11.6
Soft maple	3.7	2.5	1.2	.6	.6	--	4.2
Sweetgum	3.5	2.7	.8	.2	.1	.1	1.2
Tupelo and blackgum	23.1	8.1	15.0	5.8	3.8	2.0	15.7
Ash	11.7	6.8	4.9	2.0	1.5	.5	11.3
Sycamore	22.5	8.4	14.1	4.9	2.8	2.1	4.3
Cottonwood	1.4	.1	1.3	.4	.4	--	--
River birch	3.3	1.4	1.9	.7	.3	.4	1.2
Basswood	--	--	--	--	--	--	.2
Black walnut	20.7	13.8	6.9	2.5	1.9	.6	10.5
Black cherry	2.2	.5	1.7	.3	.1	.2	1.2
Elm	28.5	18.6	9.9	3.3	2.0	1.3	21.0
Other hardwoods	9.8	6.3	3.5	1.2	.6	.6	14.9
Noncommercial species	--	--	--	--	--	--	4.3
Total hardwoods	2,822.8	1,577.1	1,245.7	493.5	277.7	215.8	1,100.9
All species	3.169.6	1,719.0	1,450.6	584.2	320.7	263.5	1,110.2
WASHINGTON COUNTY							
Softwoods:							
Shortleaf pine	296.6	114.1	182.5	80.0	46.6	33.4	6.5
Eastern redcedar	11.4	6.4	5.0	2.1	1.1	1.0	2.4
Total softwoods	308.0	120.5	187.5	82.1	47.7	34.4	8.9
Hardwoods:							
Select white oaks	579.2	346.6	232.6	93.5	55.2	38.3	190.2
Other white oaks	201.0	127.0	74.0	29.8	19.3	10.5	130.4
Select red oaks	76.6	33.1	43.5	16.7	11.1	5.6	18.2
Red oaks	981.3	476.0	505.3	199.2	124.3	74.9	274.3
Other red oaks	33.2	21.1	12.1	5.2	2.5	2.7	48.9
Hickory A	96.1	59.0	37.1	14.4	8.4	6.0	33.1
Hickory B	124.2	77.9	46.3	18.7	9.3	9.4	51.4
Hard maple	9.0	4.6	4.4	1.7	1.3	.4	13.5
Soft maple	3.9	2.1	1.8	.7	.7	--	4.0
Sweetgum	2.8	2.1	.7	.3	.1	.2	1.0
Tupelo and blackgum	19.5	6.7	12.8	4.9	3.5	1.4	12.3
Ash	10.9	6.1	4.8	1.8	1.6	.2	10.5
Sycamore	24.1	7.9	16.2	5.5	3.9	1.6	4.6
Cottonwood	2.0	.2	1.8	.7	.7	--	--
River birch	5.8	2.0	3.8	1.5	.9	.6	1.3
Basswood	--	--	--	--	--	--	.2
Black walnut	17.1	10.8	6.3	2.2	1.7	.5	8.3
Black cherry	1.8	.4	1.4	.5	.2	.3	.8
Elm	25.7	15.8	9.9	3.4	2.3	1.1	19.1
Other hardwoods	11.2	5.8	5.4	1.9	1.4	.5	14.1
Noncommercial species	--	--	--	--	--	--	3.8
Total hardwoods	2,225.4	1,205.2	1,020.2	402.6	248.4	154.2	840.0
All species	2,533.4	1,325.7	1,207.7	484.7	296.1	188.6	848.9

1/ International 1/4-inch rule.

(Table 21 cont. on next page)

(Table 21 cont.)

WAYNE COUNTY

Species	Growing stock			Sawtimber			Rough and rotten trees
	Total	Poletimber trees	Sawtimber trees	Total	In sawtimber stands	Other stands	
	Thousand cords			Million board feet[1]			Thousand cords
Softwoods:							
Shortleaf pine	316.5	125.5	191.0	84.2	45.1	39.1	6.4
Eastern redcedar	10.3	6.2	4.1	1.6	.5	1.1	2.3
Total softwoods	326.8	131.7	195.1	85.8	45.6	40.2	8.7
Hardwoods:							
Select white oaks	543.0	328.9	214.1	86.3	49.2	37.1	176.1
Other white oaks	186.2	119.0	67.2	27.1	16.8	10.3	122.2
Select red oaks	70.6	31.3	39.3	15.1	9.7	5.4	16.7
Red oaks	915.1	454.9	460.2	181.6	108.8	72.8	256.2
Other red oaks	54.3	23.8	30.5	13.5	10.7	2.8	51.4
Hickory A	89.8	54.7	35.1	13.6	7.9	5.7	30.7
Hickory B	114.2	72.3	41.9	17.0	8.0	9.0	47.5
Hard maple	5.4	2.7	2.7	1.0	.6	.4	10.1
Soft maple	3.5	2.0	1.5	.6	.6	--	3.5
Sweetgum	4.6	3.4	1.2	.4	.3	.1	1.6
Tupelo and blackgum	18.1	6.3	11.8	4.6	3.2	1.4	11.1
Ash	10.8	6.4	4.4	1.6	1.4	.2	9.8
Sycamore	21.5	7.3	14.2	4.8	3.3	1.5	3.7
Cottonwood	1.9	.2	1.7	.7	.7	--	--
River birch	2.7	1.1	1.6	.6	.4	.2	.9
Basswood	--	--	--	--	--	--	.2
Black walnut	15.7	10.0	5.7	2.0	1.5	.5	8.0
Black cherry	1.6	.4	1.2	.4	.1	.3	.7
Elm	23.0	14.5	8.5	3.0	1.6	1.4	17.5
Other hardwoods	8.9	5.0	3.9	1.4	1.0	.4	12.3
Noncommercial species	--	--	--	--	--	--	3.3
Total hardwoods	2,090.9	1,144.2	946.7	375.3	225.8	149.5	783.5
All species	2,417.7	1,275.9	1,141.8	461.1	271.4	189.7	792.2

1/ International 1/4-inch rule.

Table 22.--*Net volume of timber on commercial forest land, by class of timber, and softwoods and hardwoods, Eastern Ozarks, Missouri, 1972*

(Million cubic feet)

Class of timber	All species	Softwoods	Hardwoods
Growing stock trees:			
Saw log trees:			
Saw log portion	763.7	120.2	643.5
Upper stem portion	275.0	30.1	244.9
Total sawtimber	1,038.7	150.3	888.4
Poletimber trees	1,176.9	103.5	1,073.4
Total growing stock	2,215.6	253.8	1,961.8
Cull trees:			
Rough cull trees:			
Sawtimber	190.8	.6	190.2
Poletimber	323.9	4.9	319.0
Total rough cull	514.7	5.5	509.2
Short log cull trees:			
Sawtimber	119.8	.3	119.5
Poletimber	.9	--	.9
Total short log	120.7	.3	120.4
Rotten cull trees:			
Sawtimber	75.7	.3	75.4
Poletimber	55.4	.9	54.5
Total rotten cull	131.1	1.2	129.9
Total cull	766.5	7.0	759.5
Salvable dead trees:			
Sawtimber	36.0	2.7	33.3
Poletimber	21.3	1.9	19.4
Total salvable dead	57.3	4.6	52.7
All classes	3,039.4	265.4	2,774.0

Table 23.--*Net volume of growing stock, sawtimber, and rough and rotten trees on commercial forest land, by individual species, Eastern Ozarks, Missouri, 1972*

Species	Growing stock	Sawtimber	Rough and rotten trees
	Million cubic feet	Million board feet[1]	Million cubic feet
Softwoods:			
Shortleaf pine	245.2	818.4	5.1
Eastern redcedar	8.6	20.3	1.9
Total softwoods	253.8	838.7	7.0
Hardwoods:			
Select white oak group			
White oak	491.3	978.5	159.6
Bur oak	.7	3.8	.3
Chinkapin oak	6.2	15.1	8.7
Overcup oak	1.1	3.2	.4
Swamp chestnut oak	.3	1.5	.1
Swamp white oak	.8	3.0	.1
Other white oak group			
Post oak	179.3	326.9	120.3
Select red oak group			
Cherrybark oak	.3	1.6	.5
Northern red oak	65.3	176.4	14.8
Shumard oak	.8	1.8	.6
Red oak group			
Black oak	571.7	1,426.6	181.5
Scarlet oak	273.5	706.3	58.5
Southern red oak	15.8	35.9	6.1
Other red oak group			
Blackjack oak	27.1	47.6	42.9
Pin oak	8.0	39.1	1.9
Shingle oak	1.1	2.8	2.3
Willow oak	5.8	26.3	1.4
Hickory A group			
Mockernut hickory	70.7	125.7	24.6
Pecan	.6	1.4	--
Shagbark hickory	7.5	17.6	4.3
Shellbark hickory	5.7	14.9	1.2
Hickory B group			
Black hickory	30.4	49.3	10.1
Bitternut hickory	5.1	9.3	2.1
Pignut hickory	72.8	144.8	33.7
Water hickory	.3	1.7	--
Hardwoods (cont.):			
Hard maple group			
Sugar maple	5.8	14.2	10.2
Soft maple group			
Red maple	1.5	--	2.0
Silver maple	2.3	9.6	1.6
Sweetgum	3.5	4.3	1.2
Tupelo and blackgum group			
Blackgum	16.3	52.7	10.7
Ash group			
White ash	5.2	9.4	6.3
Green ash	5.0	12.2	3.0
Sycamore group			
American sycamore	23.4	69.4	4.2
Cottonwood group			
Eastern cottonwood	2.2	9.7	--
River birch	5.3	17.2	1.2
Basswood group			
American basswood	--	--	.2
Black walnut	14.7	22.7	7.7
Black cherry	1.6	4.9	.8
Elm group			
Winged elm	3.1	.8	1.3
American elm	13.4	28.0	10.9
Slippery elm	3.3	5.7	3.6
Rock elm	2.3	2.8	1.9
Other hardwoods			
Hackberry	2.9	3.2	1.7
Flowering dogwood	.1	--	1.8
Common persimmon	.9	--	.7
Honeylocust	2.1	4.2	2.9
Butternut	.1	--	.6
Red mulberry	--	--	2.4
Black locust	.5	2.9	.1
Black willow	3.7	12.8	.4
Sassafras	.4	--	1.4
Boxelder	--	--	1.4
Noncommercial	--	--	3.3
Total hardwoods	1,961.8	4,447.8	759.5
All species	2,215.6	5,286.5	766.5

(Table 23 continued in next column)

1/ International 1/4-inch rule.

Table 24.--*Net volume of growing stock and sawtimber on commercial forest land, by ownership class and species group, Eastern Ozarks, Missouri, 1972*

GROWING STOCK

Ownership class	All species	Shortleaf pine	Other softwoods	Soft hardwoods	Hard hardwoods
		Thousand cords			
National Forest	7,969.0	1,706.2	3.2	178.3	6,081.3
Other federal	61.5	2.9	--	1.7	56.9
State, county and municipal	1,190.6	100.0	9.0	24.5	1,057.1
Forest industry	1,680.0	221.1	--	36.7	1,422.2
Farmer and miscellaneous private	17,144.5	1,073.1	96.8	766.4	15,208.2
All ownerships	28,045.6	3,103.3	109.0	1,007.6	23,825.7

SAWTIMBER

		Million board feet[1/]			
National Forest	1,641.7	512.3	.2	33.4	1,095.8
Other federal	12.7	1.2	--	.4	11.1
State, county, and municipal	241.6	23.9	1.2	--	216.5
Forest industry	308.3	29.7	--	4.0	274.6
Farmer and miscellaneous private	3,082.2	251.3	18.9	166.2	2,645.8
All ownerships	5,286.5	818.4	20.3	204.0	4,243.8

1/ International 1/4-inch rule.

Table 25.--*Net volume of growing stock on commercial forest land, by species and diameter class, Eastern Ozarks, Missouri, 1972*

(Thousand cords)

Species	All classes	Diameter class (inches at breast height)											
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-28.9	29.0-38.9	39.0+
Softwoods:													
Shortleaf pine	3,103.3	476.0	772.1	833.3	622.2	223.5	109.5	45.9	20.8	--	--	--	--
Eastern redcedar	109.0	30.2	31.3	22.5	13.9	2.1	9.0	--	--	--	--	--	--
Total softwoods	3,212.3	506.2	803.4	855.8	636.1	225.6	118.5	45.9	20.8	--	--	--	--
Hardwoods:													
Select white oaks	6,333.9	1,300.7	1,298.4	1,239.1	936.1	789.5	404.7	170.6	69.7	53.5	47.2	24.4	--
Other white oaks	2,270.1	497.5	504.5	455.0	375.9	247.2	134.1	38.3	5.5	6.3	5.8	--	--
Select red oaks	840.6	117.0	103.3	149.1	112.5	110.2	98.4	53.2	39.3	12.8	39.3	5.5	--
Red oaks	10,898.4	1,220.3	1,764.1	2,419.0	2,246.3	1,562.3	912.1	357.3	182.5	48.4	77.5	10.1	98.5
Other red oaks	531.5	56.3	77.6	133.5	70.6	72.6	58.2	33.7	15.7	4.9	8.4	--	--
Hickory A	1,068.9	171.8	254.6	231.1	218.5	111.5	32.7	30.5	11.9	6.3	--	--	--
Hickory B	1,374.6	253.2	292.0	321.9	224.9	158.9	94.8	20.6	5.0	--	3.3	--	--
Hard maple	73.8	8.4	11.3	16.7	14.5	7.1	6.9	.6	--	5.1	3.2	--	--
Soft maple	47.7	16.1	5.1	2.6	3.0	--	6.2	3.0	--	7.7	4.0	--	--
Sweetgum	44.5	1.4	7.8	23.5	9.5	2.3	--	--	--	--	--	--	--
Tupelo and blackgum	206.8	33.8	21.5	16.5	39.9	32.0	36.3	15.3	--	4.6	6.9	--	--
Ash	129.4	16.1	26.3	29.8	14.9	28.7	2.2	11.4	--	--	--	--	--
Sycamore	296.5	16.4	29.5	48.0	58.6	32.3	47.4	23.0	20.0	4.5	12.1	4.7	--
Cottonwood	27.4	2.6	--	--	2.7	3.0	10.4	--	8.7	--	--	--	--
River birch	67.0	3.5	9.2	11.0	10.3	17.0	3.5	2.7	--	6.7	3.1	--	--
Black walnut	186.5	41.4	43.2	37.2	40.1	11.4	3.6	7.7	1.9	--	--	--	--
Black cherry	19.8	1.8	3.1	--	6.8	8.1	--	--	--	--	--	--	--
Elm	280.3	59.6	61.4	52.8	47.3	25.5	19.7	2.8	7.6	3.6	--	--	--
Other hardwoods	135.6	9.2	22.1	38.8	20.5	17.8	6.4	5.2	13.1	--	2.5	--	--
Total hardwoods	24,833.3	3,827.1	4,535.0	5,225.6	4,452.9	3,237.4	1,877.6	775.9	380.9	164.4	213.3	44.7	98.5
All species	28,045.6	4,333.3	5,338.4	6,081.4	5,089.0	3,463.0	1,996.1	821.8	401.7	164.4	213.3	44.7	98.5

Table 26.--*Net volume of sawtimber on commercial forest land, by species and diameter class, Eastern Ozarks, Missouri, 1972*

(Million board feet)[1/]

Species	All classes	Diameter class (inches at breast height)									
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-28.9	29.0-38.9	39.0+
Softwoods:											
Shortleaf pine	818.4	355.0	276.8	102.7	51.1	22.0	10.8	--	--	--	--
Eastern redcedar	20.3	9.0	6.2	.9	4.2	--	--	--	--	--	--
Total softwoods	838.7	364.0	283.0	103.6	55.3	22.0	10.8	--	--	--	--
Hardwoods:											
Select white oaks	1,005.1	--	398.7	314.9	154.5	66.7	27.9	17.2	18.0	7.2	--
Other white oaks	326.9	--	156.5	97.6	50.5	15.2	2.1	2.5	2.5	--	--
Select red oaks	179.8	--	44.4	43.9	40.3	21.2	14.3	4.2	10.7	.8	--
Red oaks	2,168.8	--	897.1	631.2	374.2	140.0	74.2	21.3	26.9	3.6	.3
Other red oaks	115.8	--	30.4	30.9	25.8	15.5	7.4	2.1	3.7	--	--
Hickory A	159.6	--	89.1	42.0	12.8	9.9	3.8	2.0	--	--	--
Hickory B	205.1	--	95.5	60.0	37.2	8.1	2.0	--	2.3	--	--
Hard maple	14.2	--	5.5	2.8	2.8	.2	--	1.9	1.0	--	--
Soft maple	9.6	--	1.1	--	2.5	1.2	--	2.8	2.0	--	--
Sweetgum	4.3	--	3.4	.9	--	--	--	--	--	--	--
Tupelo and blackgum	52.7	--	14.2	11.4	15.9	6.2	--	1.7	3.3	--	--
Ash	21.6	--	5.6	10.5	.9	4.6	--	--	--	--	--
Sycamore	69.4	--	18.8	11.9	18.7	8.2	6.6	1.6	2.8	.8	--
Cottonwood	9.7	--	1.0	1.2	4.2	--	3.3	--	--	--	--
River birch	17.2	--	3.9	6.5	1.2	1.4	--	3.2	1.0	--	--
Black walnut	22.7	--	12.5	5.1	1.1	3.1	.9	--	--	--	--
Black cherry	4.9	--	2.2	2.7	--	--	--	--	--	--	--
Elm	37.3	--	15.5	8.8	7.6	1.0	2.9	1.5	--	--	--
Other hardwoods	23.1	--	6.6	6.2	2.7	2.2	4.4	--	1.0	--	--
Total hardwoods	4,447.8	--	1,802.0	1,288.5	752.9	304.7	149.8	62.0	75.2	12.4	.3
All species	5,286.5	364.0	2,085.0	1,392.1	808.2	326.7	160.6	62.0	75.2	12.4	.3

1/ International 1/4-inch rule.

Table 27.--*Net volume of growing stock on commercial forest land, by species and forest type, Eastern Ozarks, Missouri, 1972*

(Million cubic feet)

Species	All forest types	Shortleaf pine	Eastern redcedar	Eastern redcedar-hardwood	Shortleaf pine-oak	Post-blackjack oak	Black-scarlet oak	White oak	Oak-gum-cypress	Elm-ash-cottonwood	Maple-beech	Non-stocked
Softwoods:												
Shortleaf pine	245.2	68.6	--	--	69.7	13.3	67.4	23.9	--	1.1	--	1.2
Eastern redcedar	8.6	.5	2.1	1.0	.3	.3	.5	.6	.1	1.1	1.6	.5
Total softwoods	253.8	69.1	2.1	1.0	70.0	13.6	67.9	24.5	.1	2.2	1.6	1.7
Hardwoods:												
Select white oaks	500.4	6.3	--	.2	14.5	22.4	186.5	261.7	.9	3.4	3.6	.9
Other white oaks	179.3	1.3	--	.5	6.0	81.7	71.3	17.1	--	.2	--	1.2
Select red oaks	66.4	--	--	--	1.5	1.3	37.6	24.3	--	.9	.8	--
Red oaks	861.0	8.6	--	--	30.6	58.1	656.7	100.2	.2	3.8	.9	1.9
Other red oaks	42.0	.4	--	--	1.6	15.3	9.7	2.7	11.5	.8	--	--
Hickory A	84.5	--	--	.4	2.0	10.6	42.7	25.7	1.0	1.1	.8	.2
Hickory B	108.6	1.3	--	.1	2.7	18.5	58.7	23.6	--	1.1	2.0	.6
Hard maple	5.8	--	.1	--	--	--	1.8	.6	--	.2	3.1	--
Soft maple	3.8	--	--	--	.2	.2	.6	.5	--	2.3	--	--
Sweetgum	3.5	--	--	--	--	.2	.3	.9	.9	.9	.3	--
Tupelo and blackgum	16.3	.7	--	--	.4	.3	7.3	7.2	--	--	.2	.2
Ash	10.2	--	.1	.2	--	.7	2.2	2.2	--	3.2	1.0	.6
Sycamore	23.4	--	--	--	--	.7	2.5	1.8	--	15.7	2.3	.4
Cottonwood	2.2	--	--	--	--	--	--	--	--	2.2	--	--
River birch	5.3	--	--	--	--	--	--	--	--	5.0	.3	--
Black walnut	14.7	--	--	.1	.2	.8	5.4	6.7	--	.7	.8	--
Black cherry	1.6	--	--	--	--	--	.6	.6	--	.3	.1	--
Elm	22.1	.5	--	.1	.1	2.1	4.6	7.6	.1	2.1	4.4	.5
Other hardwoods	10.7	--	--	--	--	.7	.5	1.1	--	6.4	2.0	--
Total hardwoods	1,961.8	19.1	.2	1.6	59.8	213.6	1,089.0	484.5	14.6	50.3	22.6	6.5
All species	2,215.6	88.2	2.3	2.6	129.8	227.2	1,156.9	509.0	14.7	52.5	24.2	8.2

Table 28.--*Net volume of sawtimber on commercial forest land, by species and forest type, Eastern Ozarks, Missouri, 1972*

(Million board feet)[1/]

Species	All forest types	Shortleaf pine	Eastern redcedar	Eastern redcedar-hardwood	Shortleaf pine-oak	Post-blackjack oak	Black-scarlet oak	White oak	Oak-gum-cypress	Elm-ash-cottonwood	Maple-beech	Non-stocked
Softwoods:												
Shortleaf pine	818.4	227.7	--	--	219.2	35.5	239.8	88.1	--	4.7	--	3.4
Eastern redcedar	20.3	.7	7.4	--	.9	--	1.8	1.7	--	1.6	3.7	2.5
Total softwoods	838.7	228.4	7.4	--	220.1	35.5	241.6	89.8	--	6.3	3.7	5.9
Hardwoods:												
Select white oaks	1,005.1	13.8	--	1.0	31.4	34.8	381.5	517.8	1.2	11.6	8.5	3.5
Other white oaks	326.9	2.1	--	2.2	7.5	148.5	131.1	34.3	--	1.2	--	--
Select red oaks	179.8	--	--	--	2.5	1.0	101.8	71.0	--	2.5	1.0	--
Red oaks	2,168.8	15.1	--	--	53.6	134.8	1,673.2	276.2	--	10.0	2.3	3.6
Other red oaks	115.8	--	--	--	2.3	27.4	17.2	10.4	55.5	3.0	--	--
Hickory A	159.6	--	--	2.0	6.2	19.4	76.8	48.1	3.2	3.2	.7	--
Hickory B	205.1	--	--	.6	4.8	36.2	113.5	43.0	--	1.9	4.1	1.0
Hard maple	14.2	--	--	--	--	--	4.3	--	--	--	9.9	--
Soft maple	9.6	--	--	--	--	--	--	--	--	9.6	--	--
Sweetgum	4.3	--	--	--	--	--	1.1	.9	1.5	.8	--	--
Tupelo and blackgum	52.7	1.4	--	--	.8	.7	26.5	21.4	--	--	1.1	.8
Ash	21.6	--	.3	--	--	1.0	6.1	4.3	--	9.9	--	--
Sycamore	69.4	--	--	--	--	2.9	4.5	3.1	--	48.9	8.4	1.6
Cottonwood	9.7	--	--	--	--	--	--	--	--	9.7	--	--
River birch	17.2	--	--	--	--	--	--	--	--	16.2	1.0	--
Black walnut	22.7	--	--	--	--	--	10.9	9.2	--	--	2.6	--
Black cherry	4.9	--	--	--	--	--	1.8	2.1	--	1.0	--	--
Elm	37.3	--	--	--	--	1.0	9.8	14.1	--	2.7	8.1	1.6
Other hardwoods	23.1	--	--	--	--	1.6	2.0	--	--	15.0	4.5	--
Total hardwoods	4,447.8	32.4	.3	5.8	109.1	409.3	2,562.1	1,055.9	61.4	147.2	52.2	12.1
All species	5,286.5	260.8	7.7	5.8	329.2	444.8	2,803.7	1,145.7	61.4	153.5	55.9	18.0

1/ International 1/4-inch rule.

Table 29.--*Net volume of timber in cull trees on commercial forest land, by species and cull tree class, Eastern Ozarks, Missouri, 1972*

(Million cubic feet)

Species	All cull trees	Rough trees	Short-log trees 1/	Rotten trees
Softwoods:				
Shortleaf pine	5.1	3.9	.3	.9
Eastern redcedar	1.9	1.6	--	.3
Total softwoods	7.0	5.5	.3	1.2
Hardwoods:				
Select white oaks	169.2	107.1	36.1	26.0
Other white oaks	120.3	84.0	19.0	17.3
Select red oaks	15.9	8.2	2.6	5.1
Red oaks	246.1	161.0	35.0	50.1
Other red oaks	48.5	34.1	4.8	9.6
Hickory A	30.1	21.5	5.1	3.5
Hickory B	45.9	32.7	7.3	5.9
Hard maple	10.2	8.1	1.4	.7
Soft maple	3.6	2.8	.2	.6
Sweetgum	1.2	.8	.2	.2
Tupelo and blackgum	10.7	5.6	1.9	3.2
Ash	9.3	7.0	1.5	.8
Sycamore	4.2	2.2	1.0	1.0
River birch	1.2	.6	.5	.1
Basswood	.2	--	--	.2
Black walnut	7.7	4.8	1.2	1.7
Black cherry	.8	.8	--	--
Elm	17.7	14.6	2.1	1.0
Other hardwoods	13.4	10.2	.5	2.7
Noncommercial species	3.3	3.1	--	.2
Total hardwoods	759.5	509.2	120.4	129.9
All species	766.5	514.7	120.7	131.1

1/ Volumes are for trees 9.0 inches d.b.h. and larger for softwoods and 11.0 inches d.b.h. and larger for hardwoods. Volumes for rough and rotten trees are for trees 5.0 inches d.b.h. and larger.

Table 30.--*Net volume of short-log trees on commercial forest land, by species and diameter class, Eastern Ozarks, Missouri, 1972*

(Million board feet)[1/]

Species	All classes	Diameter class (inches at breast height)									
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-28.9	29.0-38.9	39.0+
Softwoods:											
Shortleaf pine	2.5	--	1.1	--	--	1.4	--	--	--	--	--
Total softwoods	2.5	--	1.1	--	--	1.4	--	--	--	--	--
Hardwoods:											
Select white oaks	122.4	--	51.8	37.3	16.0	8.6	3.2	2.3	2.7	.5	--
Other white oaks	69.4	--	26.4	23.2	14.3	3.6	.9	.5	.5	--	--
Select red oaks	9.5	--	3.2	1.9	3.8	--	--	--	--	.6	--
Red oaks	119.8	--	47.5	29.3	17.0	10.7	6.0	5.3	2.8	1.2	--
Other red oaks	16.3	--	9.1	.7	2.7	3.3	.5	--	--	--	--
Hickory A	17.2	--	8.3	2.9	2.1	.8	1.9	--	1.2	--	--
Hickory B	23.5	--	14.6	4.5	3.9	.5	--	--	--	--	--
Hard maple	3.4	--	.6	1.3	1.2	--	--	.3	--	--	--
Soft maple	.7	--	.7	--	--	--	--	--	--	--	--
Sweetgum	.6	--	--	.6	--	--	--	--	--	--	--
Tupelo and blackgum	6.2	--	2.3	1.7	.5	1.2	--	.5	--	--	--
Ash	3.9	--	2.3	1.3	--	.3	--	--	--	--	--
Sycamore	1.6	--	.9	--	--	--	--	--	--	--	.7
River birch	1.3	--	.7	--	.6	--	--	--	--	--	--
Black walnut	3.5	--	2.3	.6	.6	--	--	--	--	--	--
Elm	6.0	--	1.6	1.7	2.7	--	--	--	--	--	--
Other hardwoods	1.6	--	.5	.6	.5	--	--	--	--	--	--
Total hardwoods	406.9	--	172.8	107.6	65.9	29.0	12.5	8.9	7.2	2.3	.7
All species	409.4	--	173.9	107.6	65.9	30.4	12.5	8.9	7.2	2.3	.7

1/ International 1/4-inch rule.

Table 31.--*Net volume of sawtimber on commercial forest land, by species and log grade class, Eastern Ozarks, Missouri, 1972*

(Million board feet)[1/]

Species	All grades	Log Grade 1	Log Grade 2	Log Grade 3	Tie and timber
Softwoods:					
Shortleaf pine	818.4	122.4	115.5	580.5	--
Eastern redcedar	20.3	--	14.6	5.6	.1
Total softwoods	838.7	122.4	130.1	586.1	.1
Hardwoods:					
Select white oaks	1,005.1	74.2	214.6	469.6	246.7
Other white oaks	326.9	10.0	37.6	217.0	62.3
Select red oaks	179.8	18.7	51.4	86.4	23.3
Red oaks	2,168.8	77.4	491.8	1,050.3	549.3
Other red oaks	115.8	7.9	17.9	36.9	53.1
Hickory A	159.6	--	26.0	85.7	47.9
Hickory B	205.1	2.1	36.1	106.3	60.6
Hard maple	14.2	--	1.4	8.0	4.8
Soft maple	9.6	--	6.7	--	2.9
Sweetgum	4.3	--	--	--	4.3
Tupelo and blackgum	52.7	--	36.1	--	16.6
Ash	21.6	1.1	9.9	10.6	--
Sycamore	69.4	18.2	21.2	29.2	.8
Cottonwood	9.7	.7	1.6	4.8	2.6
River birch	17.2	.7	10.4	2.1	4.0
Black walnut	22.7	1.5	6.4	14.8	--
Black cherry	4.9	--	3.0	1.9	--
Elm	37.3	.4	11.9	17.3	7.7
Other hardwoods	23.1	3.0	7.9	9.1	3.1
Total hardwoods	4,447.8	215.9	991.9	2,150.0	1,090.0
All species	5,286.5	338.3	1,122.0	2,736.1	1,090.1

1/ International 1/4-inch rule.

Table 32.--*Walnut volume on nonforest land, by diameter class and class of timber, Eastern Ozarks, Missouri, 1972*

Diameter class (inches at breast height)	Growing stock trees	Sawtimber trees	Rough trees	Rotten trees
	Thousand cubic feet	Thousand board feet[1/]	Thousand cubic feet	Thousand cubic feet
5.0-6.9	--	--	507	--
7.0-8.9	618	--	786	--
9.0-10.9	669	--	1,243	224
11.0-12.9	--	--	588	132
13.0-14.9	224	1,207	864	--
15.0-16.9	937	5,788	702	--
17.0-18.9	--	--	--	73
19.0-20.9	--	--	403	--
21.0-22.9	--	--	446	--
23.0+	--	--	339	53
All diameters	2,448	6,995	5,878	482

1/ International 1/4-inch rule.

Table 33.--*Net annual growth of growing stock and sawtimber on commercial forest land, by species and county, Eastern Ozarks, Missouri, 1971*

Species	All counties		Bollinger		Butler		Carter		Crawford	
	Growing stock	Sawtimber	Growing stock	Sawtimber	Growing stock	Sawtimber	Growing stock	Sawtimber	Growing stock	Sawtimber
	Cords	Thousand bd.ft.1/	Cords	Thousand bd.ft.1/	Cords	Thousand bd.ft.1/	Cords	Thousand bd.ft.1/	Cords	Thousand bd.ft.1/
Softwoods:										
Shortleaf pine	104,312	21,192	3,688	773	5,636	1,133	7,657	1,537	5,808	1,212
Eastern redcedar	3,830	241	240	17	454	28	237	7	287	25
Total softwoods	108,142	21,433	3,928	790	6,090	1,161	7,894	1,544	6,095	1,237
Hardwoods:										
Select white oaks	171,794	17,738	8,431	936	6,409	696	10,331	1,062	13,858	1,435
Other white oaks	38,190	3,110	1,865	155	1,345	111	2,312	190	3,106	249
Select red oaks	28,936	4,875	1,476	265	1,144	201	1,731	285	2,365	405
Red oaks	446,328	62,598	21,251	3,203	16,334	2,222	27,027	3,769	35,930	5,128
Other red oaks	12,008	2,748	954	275	2,539	890	514	85	676	116
Hickory A	25,708	1,714	1,338	98	965	76	1,531	98	2,118	141
Hickory B	29,190	2,237	1,432	114	1,102	80	1,765	133	2,344	180
Hard maple	2,159	423	202	40	145	33	79	13	171	34
Soft maple	1,183	191	81	16	115	29	49	4	126	26
Sweetgum	919	90	71	8	189	23	38	3	58	5
Tupelo and blackgum	3,330	852	173	46	138	35	201	51	263	68
Ash	3,768	672	259	49	463	82	162	28	319	65
Sycamore	16,789	3,111	1,082	234	1,631	371	716	108	1,687	339
Cottonwood	418	122	35	10	63	19	12	4	51	15
River birch	2,804	719	197	52	370	99	25	5	404	104
Black walnut	3,329	404	182	23	150	16	188	23	275	34
Black cherry	394	113	21	6	18	5	22	6	34	10
Elm	3,069	546	171	42	268	62	159	24	237	47
Other hardwoods	4,493	269	264	22	369	40	217	9	397	27
Total hardwoods	794,809	102,532	39,485	5,594	33,757	5,090	47,079	5,900	64,419	8,428
All species	902,951	123,965	43,413	6,384	39,847	6,251	54,973	7,444	70,514	9,665

(Table 33 cont. on next page)

(Table 33 cont.)

Species	Dent		Iron		Madison		Oregon		Reynolds	
	Growing stock	Saw-timber	Growing stock	Saw-timber	Growing stock	Saw-timber	Growing stock	Saw-timber	Growing stock	Saw-timber
	Cords	Thousand bd.ft.1/	Cords	Thousand bd.ft.1/	Cords	Thousand bd.ft.1/	Cords	Thousand bd.ft.1/	Cords	Thousand bd.ft.1/
Softwoods:										
Shortleaf pine	6,599	1,380	6,813	1,288	8,036	1,483	7,898	1,648	9,652	1,994
Eastern redcedar	154	9	296	17	388	19	196	12	278	22
Total softwoods	6,753	1,389	7,109	1,305	8,424	1,502	8,094	1,660	9,930	2,016
Hardwoods:										
Select white oaks	13,201	1,298	12,806	1,278	9,575	988	12,113	1,273	18,874	1,938
Other white oaks	3,035	243	2,853	226	2,051	161	2,855	233	4,115	332
Select red oaks	2,188	359	2,145	358	1,596	264	2,032	339	3,194	544
Red oaks	34,731	4,747	33,597	4,629	25,125	3,457	31,638	4,487	48,902	6,936
Other red oaks	641	105	605	98	477	77	628	105	975	181
Hickory A	1,937	119	1,874	122	1,413	98	1,850	118	2,825	190
Hickory B	2,255	174	2,132	164	1,597	120	2,115	163	3,155	243
Hard maple	115	22	132	25	191	42	109	20	236	47
Soft maple	59	5	66	8	73	13	75	10	113	16
Sweetgum	46	4	44	4	35	3	46	4	75	7
Tupelo and blackgum	240	61	235	60	192	49	237	61	362	93
Ash	203	33	215	36	205	38	223	43	353	62
Sycamore	930	143	908	158	957	196	1,084	186	1,526	278
Cottonwood	14	4	18	5	25	7	25	7	34	10
River birch	68	16	155	40	267	69	99	25	273	69
Black walnut	242	29	233	28	191	22	238	29	358	45
Black cherry	29	8	28	8	22	6	26	7	43	13
Elm	205	32	187	36	181	33	198	28	298	58
Other hardwoods	288	12	220	13	226	16	354	15	399	24
Total hardwoods	60,427	7,414	58,453	7,296	44,399	5,659	55,945	7,153	86,110	11,086
All species	67,180	8,803	65,562	8,601	52,823	7,161	64,039	8,813	96,040	13,102

(Table 33 cont. below)

(Table 33 cont.)

Species	Ripley		St. Francois		Shannon		Washington		Wayne	
	Growing stock	Saw-timber	Growing stock	Saw-timber	Growing stock	Saw-timber	Growing stock	Saw-timber	Growing stock	Saw-timber
	Cords	Thousand bd.ft.1/	Cords	Thousand bd.ft.1/	Cords	Thousand bd.ft.1/	Cords	Thousand bd.ft.1/	Cords	Thousand bd.ft.1/
Softwoods:										
Shortleaf pine	8,567	1,753	2,626	513	11,452	2,352	9,458	2,006	10,422	2,120
Eastern redcedar	220	23	239	9	237	18	292	23	312	12
Total softwoods	8,787	1,776	2,865	522	11,689	2,370	9,750	2,029	10,734	2,132
Hardwoods:										
Select white oaks	10,822	1,101	5,328	538	19,956	2,039	15,470	1,630	14,620	1,526
Other white oaks	2,387	196	1,284	108	4,611	376	3,284	272	3,087	258
Select red oaks	1,796	297	916	149	3,319	550	2,598	446	2,436	413
Red oaks	28,231	3,873	14,035	1,945	52,564	7,247	39,633	5,715	37,330	5,240
Other red oaks	740	161	298	49	975	162	730	121	1,256	323
Hickory A	1,593	103	834	54	2,939	183	2,342	165	2,149	149
Hickory B	1,881	139	942	73	3,408	265	2,631	203	2,431	186
Hard maple	138	28	72	14	154	27	257	48	158	30
Soft maple	93	18	52	11	97	9	98	14	86	12
Sweetgum	62	6	29	2	72	6	58	5	96	10
Tupelo and blackgum	218	55	96	25	372	95	314	80	289	73
Ash	266	50	147	26	324	55	302	51	327	54
Sycamore	1,437	265	822	147	1,447	223	1,336	246	1,226	217
Cottonwood	36	11	22	6	24	7	30	9	29	8
River birch	307	80	156	39	129	32	244	63	110	26
Black walnut	213	25	113	13	370	44	302	39	274	34
Black cherry	26	7	14	4	43	13	36	11	32	9
Elm	235	34	106	11	298	48	264	45	262	46
Other hardwoods	376	21	214	11	402	18	407	20	360	21
Total hardwoods	50,857	6,470	25,480	3,225	91,504	11,399	70,336	9,183	66,558	8,635
All species	59,644	8,246	28,345	3,747	103,193	13,769	80,086	11,212	77,292	10,767

1/ International 1/4-inch rule.

Table 34.--*Timber removals from growing stock and sawtimber on commercial forest land, by item and species group, Eastern Ozarks, Missouri, 1971*[1/]

Item	Growing stock					Sawtimber				
	All species	Shortleaf pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Shortleaf pine	Other softwoods	Soft hardwoods	Hard hardwoods
	Cords					Thousand board feet[2/]				
Roundwood products:										
Saw logs	298,350	17,591	418	20,506	259,835	114,855	8,301	158	10,170	96,226
Cooperage logs	23,670	--	--	1,152	22,518	11,525	--	--	437	11,088
Veneer logs	304	--	--	152	152	112	--	--	55	57
Pulpwood	4,777	865	--	797	3,115	1,441	94	--	274	1,073
Charcoal wood	31,823	--	--	291	31,532	3,689	--	--	40	3,649
Posts	7,481	4,354	13	--	3,114	919	205	1	12	701
Fuelwood	23,342	--	63	1,823	21,456	4,385	--	7	337	4,041
Poles	1,291	1,291	--	--	--	173	173	--	--	--
Mine timbers	709	--	--	--	709	69	--	--	--	69
Handle bolts	3,468	--	--	316	3,152	1,343	--	--	129	1,214
Miscellaneous[3/]	911	--	--	--	911	392	--	--	--	392
All products	396,126	24,101	494	25,037	346,494	138,903	8,773	166	11,454	118,510
Logging residues	96,899	1,975	10	3,156	91,758	11,644	222	1	382	11,039
Other removals	24,696	--	--	1,960	22,736	5,853	--	--	464	5,389
Total removals	517,721	26,076	504	30,153	460,988	156,400	8,995	167	12,300	134,938

1/ See glossary for timber removals from growing stock (page 5).
2/ International 1/4-inch rule.
3/ Includes shaving wood, heading bolts, etc.

Table 35.--*Timber removals from growing stock and sawtimber on commercial forest land, by species and county, Eastern Ozarks, Missouri, 1971*[1/]

Species	All counties		Bollinger		Butler		Carter		Crawford	
	Growing stock	Sawtimber	Growing stock	Sawtimber	Growing stock	Sawtimber	Growing stock	Sawtimber	Growing stock	Sawtimber
	Cords	Thousand bd. ft.[1/]	Cords	Thousand bd. ft.[1/]	Cords	Thousand bd. ft.[1/]	Cords	Thousand bd. ft.[1/]	Cords	Thousand bd. ft.[1/]
Softwoods:										
Shortleaf pine	26,076	8,995	292	122	1,594	458	3,026	1,055	21	8
Cypress	111	44	60	25	41	18	--	--	--	--
Eastern redcedar	393	123	20	2	--	--	--	--	20	2
Total softwoods	26,580	9,162	372	149	1,635	476	3,026	1,055	41	10
Hardwoods:										
Select white oaks	100,021	29,390	6,822	2,142	3,925	1,084	7,696	2,356	7,010	2,021
Other white oaks	53,865	15,827	3,662	1,148	2,102	578	4,156	1,273	3,768	1,086
Select red oaks	18,272	5,186	953	286	666	196	1,147	331	1,139	297
Red oaks	221,881	62,976	11,577	3,473	8,091	2,386	13,933	4,024	13,826	3,601
Other red oaks	20,883	5,927	1,090	327	762	225	1,311	378	1,301	339
Hickory A	17,904	6,059	1,531	571	588	204	2,993	1,054	868	239
Hickory B	21,017	7,112	1,798	670	690	239	3,513	1,238	1,018	281
Hard maple	2,874	1,101	519	197	38	17	--	--	949	365
Soft maple	2,393	1,062	392	181	570	239	--	--	266	123
Beech	76	30	76	30	--	--	--	--	--	--
Sweetgum	5,153	2,098	1,152	534	2,392	891	--	3	--	--
Tupelo and blackgum	4,559	1,965	412	189	153	73	150	49	162	61
Ash	1,899	651	532	201	278	82	89	24	101	22
Sycamore	9,101	4,064	1,253	573	620	259	139	42	2,278	1,052
Cottonwood	1,014	432	122	55	267	98	3	1	36	14
River birch	291	114	114	50	139	39	--	--	13	8
Yellow-poplar	152	70	127	60	--	--	--	--	--	--
Basswood	13	8	--	--	--	--	--	--	13	8
Black walnut	772	276	--	1	76	28	76	28	--	--
Black cherry	140	64	25	13	--	--	--	3	--	--
Elm	5,583	2,057	1,038	464	1,392	528	190	33	380	131
Other hardwoods	3,278	769	216	52	339	101	129	24	313	77
Total hardwoods	491,141	147,238	33,411	11,217	23,088	7,267	35,525	10,861	33,441	9,725
All species	517,721	156,400	33,783	11,366	24,723	7,743	38,551	11,916	33,482	9,735

(Table 35 cont. on next page)

(Table 35 cont.)

Species	Dent		Iron		Madison		Oregon		Reynolds	
	Growing stock	Sawtimber	Growing stock	Sawtimber	Growing stock	Sawtimber	Growing stock	Sawtimber	Growing stock	Sawtimber
	Cords	Thousand bd. ft.1/	Cords	Thousand bd. ft.1/	Cords	Thousand bd. ft.1/	Cords	Thousand bd. ft.1/	Cords	Thousand bd. ft.1/
Softwoods:										
Shortleaf pine	1,614	394	847	317	3,944	1,423	1,836	457	3,248	1,295
Cypress	--	--	--	--	--	--	--	--	--	--
Eastern redcedar	--	--	--	--	--	--	--	--	--	--
Total softwoods	1,614	394	847	317	3,944	1,423	1,836	457	3,248	1,295
Hardwoods:										
Select white oaks	8,458	2,190	3,897	1,004	3,982	1,116	11,486	3,187	10,689	3,283
Other white oaks	4,572	1,184	2,090	541	2,134	601	6,226	1,724	5,732	1,765
Select red oaks	1,825	406	719	212	844	253	1,832	537	2,067	618
Red oaks	22,165	4,927	8,726	2,576	10,242	3,068	22,251	6,524	25,101	7,498
Other red oaks	2,086	464	821	242	964	289	2,094	614	2,362	706
Hickory A	868	186	1,386	491	914	326	1,019	336	2,207	788
Hickory B	1,018	219	1,627	576	1,073	383	1,196	394	2,590	926
Hard maple	--	--	51	20	646	244	--	--	190	73
Soft maple	--	--	--	--	13	4	--	--	--	--
Beech	--	--	--	--	--	--	--	--	--	--
Sweetgum	13	4	--	1	25	13	13	5	127	59
Tupelo and blackgum	183	77	246	100	592	271	208	87	1,066	474
Ash	--	1	25	8	177	66	89	35	177	68
Sycamore	228	103	253	114	823	376	418	193	886	403
Cottonwood	3	1	4	2	81	37	94	45	7	2
River birch	--	--	--	3	--	2	--	--	--	--
Yellow-poplar	--	--	--	--	--	--	--	--	--	--
Basswood	--	--	--	--	--	--	--	--	--	--
Black walnut	76	28	--	--	13	5	76	28	101	34
Black cherry	13	5	13	4	13	3	--	--	76	34
Elm	165	36	203	58	190	74	253	88	354	146
Other hardwoods	235	55	209	41	168	45	208	42	267	68
Total hardwoods	41,908	9,886	20,270	5,993	22,894	7,176	47,463	13,839	53,999	16,945
All species	43,522	10,280	21,117	6,310	26,838	8,599	49,299	14,296	57,247	18,240

(Table 35 cont. on next page)

(Table 35 cont.)

Species	Ripley		St. Francois		Shannon		Washington		Wayne	
	Growing stock	Sawtimber	Growing stock	Sawtimber	Growing stock	Sawtimber	Growing stock	Sawtimber	Growing stock	Sawtimber
	Cords	Thousand bd. ft.1/	Cords	Thousand bd. ft.1/	Cords	Thousand bd. ft.1/	Cords	Thousand bd. ft.1/	Cords	Thousand bd. ft.1/
Softwoods:										
Shortleaf pine	918	349	111	47	4,974	1,585	1,039	437	2,612	1,048
Cypress	10	1	--	--	--	--	--	--	--	--
Eastern redcedar	--	--	10	2	--	--	343	117	--	--
Total softwoods	928	350	121	49	4,974	1,585	1,382	554	2,612	1,048
Hardwoods:										
Select white oaks	6,882	2,002	6,014	2,180	8,109	2,337	6,333	1,983	8,718	2,505
Other white oaks	3,714	1,079	3,260	1,179	4,396	1,262	3,386	1,064	4,667	1,343
Select red oaks	1,664	499	96	27	2,620	718	490	144	2,210	662
Red oaks	20,206	6,064	1,162	324	31,816	8,714	5,950	1,753	26,835	8,044
Other red oaks	1,902	571	109	30	2,995	820	560	165	2,526	757
Hickory A	1,514	514	169	60	1,082	296	506	177	2,259	817
Hickory B	1,777	602	198	71	1,273	346	594	207	2,652	960
Hard maple	--	1	51	21	--	--	215	79	215	84
Soft maple	1,000	443	--	--	--	--	--	--	152	72
Beech	--	--	--	--	--	--	--	--	--	--
Sweetgum	962	401	--	--	13	4	--	--	456	183
Tupelo and blackgum	394	169	55	26	271	108	57	14	610	267
Ash	190	63	--	2	76	25	--	--	165	54
Sycamore	861	358	278	130	89	36	203	90	772	335
Cottonwood	8	3	207	95	5	1	6	2	171	76
River birch	--	--	--	2	--	--	--	--	25	10
Yellow-poplar	--	--	--	--	--	--	--	--	25	10
Basswood	--	--	--	--	--	--	--	--	--	--
Black walnut	76	28	63	21	76	28	63	19	76	28
Black cherry	--	--	--	2	--	--	--	--	--	--
Elm	709	264	76	19	101	31	165	39	367	146
Other hardwoods	333	80	150	36	209	39	268	60	234	49
Total hardwoods	42,192	13,141	11,888	4,225	53,131	14,765	18,796	5,796	53,135	16,402
All species	43,120	13,491	12,009	4,274	58,105	16,350	20,178	6,350	55,747	17,450

1/ International 1/4-inch rule.

Table 36.--*Annual mortality of growing stock and sawtimber on commercial forest land, by cause and softwoods and hardwoods, Eastern Ozarks, Missouri, 1971*

Cause	Growing stock			Sawtimber		
	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
	Thousand cubic feet			Thousand board feet[1/]		
Disease	1,626	--	1,626	2,215	--	2,215
Fire	161	--	161	185	--	185
Weather	311	76	235	1,395	439	956
Suppression	38	38	--	--	--	--
Unknown and other	902	140	762	338	--	338
Logging	209	51	158	328	--	328
All causes	3,247	305	2,942	4,461	439	4,022

1/ International 1/4-inch rule.

Table 37.--*Annual mortality of growing stock and sawtimber on commercial forest land, by species, Eastern Ozarks, Missouri, 1971*

Species	Growing stock	Sawtimber
	Thousand cubic feet	Thousand board feet[1/]
Softwoods:		
Shortleaf pine	246	439
Eastern redcedar	59	--
Total softwoods	305	439
Hardwoods:		
Select white oaks	441	252
Other white oaks	446	391
Red oaks	1,128	2,297
Other red oaks	195	223
Hickory A	180	253
Hickory B	195	328
Sycamore	57	--
Black walnut	71	--
Elm	229	278
Total hardwoods	2,942	4,022
All species	3,247	4,461

1/ International 1/4-inch rule.

Table 38.--*Output of timber products by source of material and softwoods and hardwoods, Eastern Ozarks, Missouri, 1969*

Product and species group	Standard unit[1/]	Total		Roundwood products				Plant byproducts	
				Growing stock		Nongrowing stock			
		No. of units	M cu. ft.	No. of units	M cu. ft.	No. of units	M cu. ft.	No. of units	M cu. ft.
Saw logs:	M bd. ft.								
Softwood		11,187	1,949	11,187	1,949	--	--	--	--
Hardwood		180,179	31,850	125,050	22,147	55,129	9,703	--	--
Total		191,366	33,799	136,237	24,096	55,129	9,703	--	--
Veneer logs:	M bd. ft.								
Softwood		---	--	--	--	--	--	--	--
Hardwood		114	24	114	24	--	--	--	--
Total		114	24	114	24	--	--	--	--
Cooperage logs:	M bd. ft.								
Softwood		--	--	--	--	--	--	--	--
Hardwood		14,574	2,415	13,150	2,179	1,424	236	--	--
Total		14,574	2,415	13,150	2,179	1,424	236	--	--
Pulpwood:	Std. cords								
Softwood		--	--	--	--	--	--	--	--
Hardwood		14,178	1,120	--	--	--	--	14,178	1,120
Total		14,178	1,120	--	--	--	--	14,178	1,120
Poles:	M pieces								
Softwood		43,200	128	43,200	128	--	--	--	--
Hardwood		--	--	--	--	--	--	--	--
Total		43,200	128	43,200	128	--	--	--	--
Mine timbers:	M cu. ft.								
Softwood		--	--	--	--	--	--	--	--
Hardwood		73	73	56	56	17	17	--	--
Total		73	73	56	56	17	17	--	--
Posts:	M pieces								
Softwood		832	635	567	433	265	202	--	--
Hardwood		624	343	445	246	179	97	--	--
Total		1,456	978	1,012	679	444	299	--	--
Charcoal wood:	Std. cords								
Softwood		629	44	--	--	--	--	629	44
Hardwood		137,002	9,578	35,971	2,514	76,831	5,370	24,200	1,694
Total		137,631	9,622	35,971	2,514	76,831	5,370	24,829	1,738
Other:[2/]	M cu. ft.								
Softwood		4	4	--	--	--	--	4	4
Hardwood		496	496	346	346	30	30	120	120
Total		500	500	346	346	30	30	124	124
Fuelwood:	Std. cords								
Softwood		287	22	73	6	106	9	108	7
Hardwood		98,944	6,440	28,248	1,839	60,973	3,969	9,723	632
Total		99,231	6,462	28,321	1,845	61,079	3,978	9,831	639
All products:	M cu. ft.								
Softwood		2,782	2,782	2,516	2,516	211	211	55	55
Hardwood		52,339	52,339	29,351	29,351	19,422	19,422	3,566	3,566
Total		55,121	55,121	31,867	31,867	19,633	19,633	3,621	3,621

1/ M (meaning thousand) board feet by International 1/4-inch rule. Cords are on a roughwood, 128-cubic-foot basis.

2/ Other (industrial production) includes handle bolts, shaving bolts, heading stock, etc.

Table 39.--*Forest products harvested by ownership class and product, Eastern Ozarks, Missouri, 1969*

Ownership class	Saw logs	Cooperage logs	Veneer logs	Pulpwood	Charcoal wood	Posts	Fuelwood	Poles	Mine timbers	Handle bolts	Miscellaneous
	M bd.ft.[1]	M bd.ft.[1]	M bd.ft.[1]	Cords[2]	Cords[2]	M pieces	Cords[2]	Pieces	M cu.ft.	M bd.ft.[1]	M cu.ft.
Federal:											
National Forest:											
Softwoods	5,079	--	--	--	--	411	--	400	--	--	--
Hardwoods	20,982	16	11	--	1,852	--	5,210	--	--	--	--
Corps of Engineers:											
Hardwoods	14	4	--	--	--	--	--	--	--	--	--
Total	26,075	20	11	--	1,852	411	5,210	400	--	--	--
State:											
Softwoods	126	--	--	--	--	14	--	--	--	--	--
Hardwoods	1,457	69	--	--	481	--	8	--	--	100	--
Total	1,583	69	--	--	481	14	8	--	--	100	--
Private:											
Industrial:											
Softwoods	228	--	--	--	--	--	--	--	--	--	--
Hardwoods	9,721	135	--	--	15,670	--	--	--	--	--	--
Farm and other:											
Softwoods	5,754	--	--	--	--	407	179	42,800	--	--	--
Hardwoods	148,005	14,350	103	--	94,799	624	84,003	--	73	1,821	72
Total	163,708	14,485	103	--	110,469	1,031	84,182	42,800	73	1,821	72
All owners:											
Softwoods	11,187	--	--	--	--	832	179	43,200	--	--	--
Hardwoods	180,179	14,574	114	--	112,802	624	89,221	--	73	1,921	72
Total	191,366	14,574	114	--	112,802	1,456	89,400	43,200	73	1,921	72

1/ International 1/4-inch rule.
2/ Standard cords, rough wood basis.

Table 40.--*Volume of primary plant residue, by kind of material and type of use, Eastern Ozarks, Missouri, 1969*

(Thousand cubic feet)

Source industry and kind of residue	Volume by type of use								
	Fiber[1]		Charcoal		Fuel[2]		Other[3]		Not used[4]	
	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods
Lumber:										
Coarse	971	44	1,532	6	392	1	5	323	3,755	
Fine	86	--	--	1	13	3	97	273	4,404	
Total	1,057	44	1,532	7	405	4	102	596	8,159	
All other:										
Coarse	63	--	120	--	144	--	--	--	70	
Fine	--	--	42	--	83	--	18	--	445	
Total	63	--	162	--	227	--	18	--	515	
All industries:										
Coarse	1,034	44	1,652	6	536	1	5	323	3,825	
Fine	86	--	42	1	96	3	115	273	4,849	
Total	1,120	44	1,694	7	632	4	120	596	8,674	

1/ For manufacture of pulp, hardboard, or roofing felt.
2/ All residue used for industrial or domestic fuel whether sold or given away.
3/ Includes uses such as livestock bedding, mulch, small dimension, and specialty items.
4/ Includes residue burned as waste.

Table 41.--*Timber products output from roundwood, by species and product, Eastern Ozarks, Missouri, 1969*

Species	Saw logs		Veneer logs		Cooperage logs		Charcoal wood		Other products 3/	All products
	M bd. ft. 1/	M cu. ft.	M bd. ft. 1/	M cu. ft.	M bd. ft. 1/	M cu. ft.	Cords 2/	M cu. ft.	M cu. ft.	M cu. ft.
Softwoods:										
Shortleaf pine	10,535	1,829	0	0	0	0	0	0	762	2,591
Cypress	52	9	0	0	0	0	0	0	1	10
Eastern redcedar	152	33	0	0	0	0	0	0	15	48
Other softwoods	448	78	0	0	0	0	0	0	0	78
Total softwoods	11,187	1,949	0	0	0	0	0	0	778	2,727
Hardwoods:										
White oaks	37,858	6,757	0	0	13,478	2,222	21,464	1,505	4,242	14,726
Red oaks	46,346	8,269	0	0	0	0	6,822	474	387	9,130
Black oak	71,780	12,812	0	0	0	0	69,237	4,846	821	18,479
Hickory	10,204	1,745	56	12	0	0	13,867	968	552	3,277
Hard maple	1,042	177	0	0	0	0	10	0	0	177
Soft maple	1,124	179	0	0	47	9	0	0	4	192
Beech	28	4	0	0	0	0	0	0	0	4
Sweetgum	1,853	295	6	1	571	98	0	0	4	398
Blackgum	2,018	316	0	0	0	0	162	9	1	326
Ash	487	80	0	0	47	9	235	16	25	130
Cottonwood	360	55	0	0	47	9	0	0	0	64
Basswood	9	1	0	0	0	0	0	0	0	1
Yellow-poplar	79	12	0	0	0	0	0	0	0	12
Black walnut	587	129	3	0	0	0	1	0	0	129
Black cherry	72	11	0	0	0	0	20	1	0	12
Elm	1,799	286	0	0	189	33	684	46	307	672
Birch	91	13	0	0	47	9	0	0	0	22
Sycamore	4,358	696	49	11	148	26	300	19	3	755
Other hardwoods	84	13	0	0	0	0	0	0	254	267
Total hardwoods	180,179	31,850	114	24	14,574	2,415	112,802	7,884	6,600	48,773
All species	191,366	33,799	114	24	14,574	2,415	112,802	7,884	7,378	51,500

1/ International 1/4-inch rule.
2/ Standard cords, rough wood basis.
3/ Includes posts, fuelwood, shaving bolts, heading bolts, etc.

Table 42.--*Average annual allowable cut for 1972-1981 from harvest cuttings and thinnings, on commercial forest land, by species and kind of material, Eastern Ozarks, Missouri*

Species	Growing stock1/			Sawtimber1/	Rough and rotten trees		
	Total	Poletimber trees	Sawtimber trees	Total	Total	Short-log trees	Other
	Cords			Thousand board feet2/	Cords		
Softwoods:							
Shortleaf pine	76,076	21,595	54,481	23,015	2,911	51	2,860
Eastern redcedar	1,924	1,342	582	230	684	--	684
Total softwoods	78,000	22,937	55,063	23,245	3,595	51	3,544
Hardwoods:							
Select white oaks	164,519	71,380	93,139	35,540	59,797	13,936	45,861
Other white oaks	56,620	23,911	32,709	12,360	37,759	6,810	30,949
Select red oaks	24,025	5,266	18,759	7,265	7,481	1,810	5,671
Red oaks	285,177	94,823	190,354	75,068	95,532	15,836	79,696
Other red oaks	10,582	2,481	8,101	3,466	9,671	1,127	8,544
Hickory A	21,215	9,759	11,456	4,011	6,975	949	6,026
Hickory B	35,785	17,836	17,949	7,003	15,797	2,886	12,911
Hard maple	2,278	962	1,316	518	5,532	886	4,646
Soft maple	1,013	759	254	97	1,962	266	1,696
Sweetgum	962	506	456	174	734	215	519
Tupelo and blackgum	5,608	1,253	4,355	1,662	4,443	886	3,557
Ash	4,557	2,278	2,279	828	4,329	937	3,392
Sycamore	9,316	2,519	6,797	2,107	1,722	342	1,380
River birch	1,975	646	1,329	504	1,139	595	544
Basswood	--	--	--	--	177	--	177
Black walnut	5,304	2,646	2,658	852	2,139	709	1,430
Black cherry	633	--	633	252	532	--	532
Elm	6,608	2,620	3,988	1,425	5,469	1,051	4,418
Other hardwoods	2,494	1,317	1,177	391	7,468	177	7,291
Noncommercial species	--	--	--	--	228	--	228
Total hardwoods	638,671	240,962	397,709	153,523	268,886	49,418	219,468
All species	716,671	263,899	452,772	176,768	272,481	49,469	223,012

1/ Cuttings of less than 3 cords per acre, or the equivalent in board feet, are excluded.
2/ International 1/4-inch rule.

Table 43.--*Average annual allowable cut of growing stock for 1972-1981 from harvest cuttings and thinnings, on commercial forest land, by species and forest type, Eastern Ozarks, Missouri*[1/]

(Thousand cubic feet)

Species	All forest types	Shortleaf pine	Eastern redcedar	Eastern redcedar-hardwood	Shortleaf pine-oak	Post-blackjack oak	Black-scarlet oak	White oak	Oak-gum-cypress	Elm-ash-cottonwood	Maple-beech
Softwoods:											
Shortleaf pine	6,010	2,194	--	--	1,934	300	1,083	407	--	92	--
Eastern redcedar	152	33	26	27	28	--	--	--	--	10	28
Total softwoods	6,162	2,227	26	27	1,962	300	1,083	407	--	102	28
Hardwoods:											
Select white oaks	12,997	224	--	--	455	475	5,322	6,230	--	192	99
Other white oaks	4,473	34	--	43	198	2,528	1,303	356	--	11	--
Select red oaks	1,898	--	--	--	--	--	1,377	493	--	28	--
Red oaks	22,529	378	--	--	948	1,520	16,968	2,421	--	242	52
Other red oaks	836	15	--	--	23	272	81	44	401	--	--
Hickory A	1,676	--	--	--	56	243	726	551	16	84	--
Hickory B	2,827	45	--	--	92	570	1,562	496	--	18	44
Hard maple	180	--	4	--	--	--	67	--	--	--	109
Soft maple	80	--	--	--	15	--	--	35	--	30	--
Sweetgum	76	--	--	--	--	--	23	--	33	7	13
Tupelo and blackgum	443	39	--	--	--	16	136	228	--	--	24
Ash	360	--	4	20	--	49	80	72	--	97	38
Sycamore	736	--	--	--	--	26	105	--	--	426	179
River birch	156	--	--	--	--	--	--	--	--	126	30
Black walnut	419	--	--	--	7	--	145	175	--	51	41
Black cherry	50	--	--	--	--	--	35	7	--	8	--
Elm	522	20	--	--	15	19	118	140	--	44	166
Other hardwoods	197	--	--	--	--	12	--	13	--	57	115
Total hardwoods	50,455	755	8	63	1,809	5,730	28,048	11,261	450	1,421	910
All species	56,617	2,982	34	90	3,771	6,030	29,131	11,668	450	1,523	938

1/ Cuttings of less than 240 cubic feet per acre are excluded.

Table 44.--*Average annual allowable cut of growing stock for 1972-1981 from harvest cuttings and thinnings, on commercial forest land, by species and stand-volume class, Eastern Ozarks, Missouri* 1/

(Thousand cubic feet)

Species	All classes	Stand-volume class (cubic feet per acre)				
		240-399	400-799	800-1,199	1,200-1,599	1,600+
Softwoods:						
Shortleaf pine	6,010	1,044	2,382	1,918	97	569
Eastern redcedar	152	54	70	28	--	--
Total softwoods	6,162	1,098	2,452	1,946	97	569
Hardwoods:						
Select white oaks	12,997	1,326	4,039	5,063	1,679	890
Other white oaks	4,473	854	2,340	1,114	165	--
Select red oaks	1,898	145	551	923	279	--
Red oaks	22,529	1,855	7,125	9,234	2,967	1,348
Other red oaks	836	94	243	98	401	--
Hickory A	1,676	91	509	962	114	--
Hickory B	2,827	229	917	930	600	151
Hard maple	180	4	30	99	47	--
Soft maple	80	--	62	18	--	--
Sweetgum	76	--	20	--	56	--
Tupelo and blackgum	443	43	136	187	56	21
Ash	360	20	178	101	14	47
Sycamore	736	11	340	345	40	--
River birch	156	--	126	30	--	--
Black walnut	419	16	126	149	128	--
Black cherry	50	--	15	--	35	--
Elm	522	70	112	201	139	--
Other hardwoods	197	18	96	13	70	--
Total hardwoods	50,455	4,776	16,965	19,467	6,790	2,457
All species	56,617	5,874	19,417	21,413	6,887	3,026

1/ Cuttings of less than 240 cubic feet per acre are excluded.

Table 45.--*Average annual allowable cut by harvest cuttings of growing stock for 1972-1981 on commercial forest land, by species and stand-volume class, Eastern Ozarks, Missouri*

(Thousand cubic feet)

Species	All classes	Stand-volume class[1/] (cubic feet per acre)				
		240-399	400-799	800-1,199	1,200-1,599	1,600+
Softwoods:						
Shortleaf pine	4,434	476	1,828	1,478	83	569
Eastern redcedar	142	54	60	28	--	--
Total softwoods	4,576	530	1,888	1,506	83	569
Hardwoods:						
Select white oaks	11,490	885	3,321	4,844	1,550	890
Other white oaks	4,137	749	2,136	1,101	151	--
Select red oaks	1,741	92	447	923	279	--
Red oaks	17,529	650	4,809	8,081	2,641	1,348
Other red oaks	819	87	233	98	401	--
Hickory A	1,520	66	443	897	114	--
Hickory B	2,588	146	761	930	600	151
Hard maple	174	4	24	99	47	--
Soft maple	50	--	32	18	--	--
Sweetgum	56	--	--	--	56	--
Tupelo and blackgum	406	31	111	187	56	21
Ash	307	20	125	101	14	47
Sycamore	518	11	122	345	40	--
River birch	30	--	--	30	--	--
Black walnut	374	--	97	149	128	--
Black cherry	35	--	--	--	35	--
Elm	424	49	35	201	139	--
Other hardwoods	113	18	12	13	70	--
Total hardwoods	42,311	2,808	12,708	18,017	6,321	2,457
All species	46,887	3,338	14,596	19,523	6,404	3,026

1/ Cuttings of less than 240 cubic feet per acre are excluded.

Table 46.--*Average annual allowable cut by thinnings of growing stock for 1972-1981 on commercial forest land, by species and stand-volume class, Eastern Ozarks, Missouri*

(Thousand cubic feet)

Species	All classes	Stand-volume class[1/] (cubic feet per acre) 240-399	400-799	800-1,199	1,200-1,599
Softwoods:					
Shortleaf pine	1,576	568	554	440	14
Eastern redcedar	10	--	10	--	--
Total softwoods	1,586	568	564	440	14
Hardwoods:					
Select white oaks	1,507	441	718	219	129
Other white oaks	336	105	204	13	14
Select red oaks	157	53	104	--	--
Red oaks	5,000	1,205	2,316	1,153	326
Other red oaks	17	7	10	--	--
Hickory A	156	25	66	65	--
Hickory B	239	83	156	--	--
Hard maple	6	--	6	--	--
Soft maple	30	--	30	--	--
Sweetgum	20	--	20	--	--
Tupelo and blackgum	37	12	25	--	--
Ash	53	--	53	--	--
Sycamore	218	--	218	--	--
River birch	126	--	126	--	--
Black walnut	45	16	29	--	--
Black cherry	15	--	15	--	--
Elm	98	21	77	--	--
Other hardwoods	84	--	84	--	--
Total hardwoods	8,144	1,968	4,257	1,450	469
All species	9,730	2,536	4,821	1,890	483

1/ Cuttings of less than 240 cubic feet per acre are excluded.

Table 47.--*Average annual allowable cut of sawtimber*[1/] *for 1972-1981 from harvest cuttings and thinnings, on commercial forest land, by species and forest type, Eastern Ozarks, Missouri*

(Thousand board feet)[2/]

Species	All forest types	Shortleaf pine	Eastern redcedar	Eastern redcedar-hardwood	Shortleaf pine-oak	Post-blackjack oak	Black-scarlet oak	White oak	Oak-gum-cypress	Elm-ash-cottonwood	Maple-beech
Softwoods:											
Shortleaf pine	23,585	8,333	--	--	7,925	899	4,034	2,012	--	382	--
Eastern redcedar	426	58	234	--	79	--	1	--	--	54	--
Total softwoods	24,011	8,391	234	--	8,004	899	4,035	2,012	--	436	--
Hardwoods:											
Select white oaks	36,173	347	--	22	1,470	1,334	14,133	17,813	46	640	368
Other white oaks	12,724	27	--	188	463	7,386	3,629	971	--	60	--
Select red oaks	7,294	--	--	--	--	--	5,389	1,804	--	101	--
Red oaks	76,344	1,072	--	--	2,286	4,698	57,356	10,261	--	591	80
Other red oaks	3,545	--	--	--	128	787	416	199	2,015	--	--
Hickory A	4,291	--	--	44	265	640	1,548	1,489	106	199	--
Hickory B	7,220	--	--	6	264	1,279	4,080	1,499	--	--	92
Hard maple	518	--	--	--	--	--	157	--	--	--	361
Soft maple	97	--	--	--	--	--	--	--	--	97	--
Sweetgum	174	--	--	--	--	--	114	--	52	8	--
Tupelo and blackgum	1,687	60	--	--	--	77	631	801	--	--	118
Ash	828	--	10	--	--	119	128	131	--	440	--
Sycamore	2,108	--	--	--	--	135	262	--	--	1,188	523
River birch	504	--	--	--	--	--	--	--	--	387	117
Black walnut	854	--	--	--	--	--	309	484	--	--	61
Black cherry	252	--	--	--	--	--	190	28	--	34	--
Elm	1,425	--	--	--	--	--	439	595	--	77	314
Other hardwoods	391	--	--	--	--	--	--	--	--	41	350
Total hardwoods	156,429	1,506	10	260	4,876	16,455	88,781	36,075	2,219	3,863	2,384
All species	180,440	9,897	244	260	12,880	17,354	92,816	38,087	2,219	4,299	2,384

1/ Cuttings of less than 3 cords per acre, or the equivalent in board feet, are included.

2/ International 1/4-inch rule.

Table 48.--*Average annual allowable cut of sawtimber[1] for 1972-1981 from harvest cuttings and thinnings, on commercial forest land, by species and stand-volume class, Eastern Ozarks, Missouri*

(Thousand board feet)[2]

Species	All classes	Stand-volume class (board feet per acre)			
		0-1,499	1,500-2,499	2,500-4,999	5,000-7,499
Softwoods:					
Shortleaf pine	23,585	6,895	5,000	9,641	2,049
Eastern redcedar	426	426	--	--	--
Total softwoods	24,011	7,321	5,000	9,641	2,049
Hardwoods:					
Select white oaks	36,173	7,689	8,295	17,382	2,807
Other white oaks	12,724	4,948	3,692	4,084	--
Select red oaks	7,294	1,682	1,045	4,567	--
Red oaks	76,344	12,347	24,756	31,045	8,196
Other red oaks	3,545	859	566	2,120	--
Hickory A	4,291	745	2,306	1,109	131
Hickory B	7,220	1,778	935	3,181	1,326
Hard maple	518	18	361	139	--
Soft maple	97	97	--	--	--
Sweetgum	174	8	--	166	--
Tupelo and blackgum	1,687	354	221	764	348
Ash	828	152	308	368	--
Sycamore	2,108	842	469	797	--
River birch	504	387	117	--	--
Black walnut	854	213	245	396	--
Black cherry	252	62	--	--	190
Elm	1,425	153	184	933	155
Other hardwoods	391	125	266	--	--
Total hardwoods	156,429	32,459	43,766	67,051	13,153
All species	180,440	39,780	48,766	76,692	15,202

1/ Cuttings of less than 3 cords per acre, or the equivalent in board feet, are included.

2/ International 1/4-inch rule.

Table 49.--*Average annual allowable cut by harvest cuttings of sawtimber[1] for 1972-1981 on commercial forest land, by species and stand-volume class, Eastern Ozarks, Missouri*

(Thousand board feet)[2]

Species	All classes	Stand-volume class (board feet per acre)			
		0-1,499	1,500-2,499	2,500-4,999	5,000-7,499
Softwoods:					
Shortleaf pine	17,966	3,208	4,664	8,045	2,049
Eastern redcedar	371	371	--	--	--
Total softwoods	18,337	3,579	4,664	8,045	2,049
Hardwoods:					
Select white oaks	33,391	6,122	7,580	16,882	2,807
Other white oaks	12,124	4,509	3,531	4,084	--
Select red oaks	6,680	1,130	983	4,567	--
Red oaks	64,370	6,083	19,305	30,786	8,196
Other red oaks	3,499	813	566	2,120	--
Hickory A	3,769	488	2,306	844	131
Hickory B	6,670	1,288	875	3,181	1,326
Hard maple	500	--	361	139	--
Sweetgum	166	--	--	166	--
Tupelo and blackgum	1,534	201	221	764	348
Ash	730	54	308	368	--
Sycamore	1,609	343	469	797	--
River birch	117	--	117	--	--
Black walnut	745	104	245	396	--
Black cherry	190	--	--	--	190
Elm	1,315	43	184	933	155
Other hardwoods	307	41	266	--	--
Total hardwoods	137,716	21,219	37,317	66,027	13,153
All species	156,053	24,798	41,981	74,072	15,202

1/ Cuttings of less than 3 cords per acre, or the equivalent in board feet, are included.

2/ International 1/4-inch rule.

Table 50.--*Average annual allowable cut by thinnings of sawtimber*[1] *for 1972-1981 on commercial forest land, by species and stand-volume class, Eastern Ozarks, Missouri*

(Thousand board feet)[2]

Species	All classes	Stand-volume class (board feet per acre)		
		0- 1,499	1,500- 2,499	2,500- 4,999
Softwoods:				
Shortleaf pine	5,619	3,687	336	1,596
Eastern redcedar	55	55	--	--
Total softwoods	5,674	3,742	336	1,596
Hardwoods:				
Select white oaks	2,782	1,567	715	500
Other white oaks	600	439	161	--
Select red oaks	614	552	62	--
Red oaks	11,974	6,264	5,451	259
Other red oaks	46	46	--	--
Hickory A	522	257	--	265
Hickory B	550	490	60	--
Hard maple	18	18	--	--
Soft maple	97	97	--	--
Sweetgum	8	8	--	--
Tupelo and blackgum	153	153	--	--
Ash	98	98	--	--
Sycamore	499	499	--	--
River birch	387	387	--	--
Black walnut	109	109	--	--
Black cherry	62	62	--	--
Elm	110	110	--	--
Other hardwoods	84	84	--	--
Total hardwoods	18,713	11,240	6,449	1,024
All species	24,387	14,982	6,785	2,620

1/ Cuttings of less than 3 cords per acre, or the equivalent in board feet, are included.

2/ International 1/4-inch rule.

Table 51.--*Area of allowable cut*[1/] *by harvest cuttings on commercial forest land for 1972-1981, by forest type and stand-age class, Eastern Ozarks, Missouri*

(Thousand acres)

Forest type	All ages	Stand-age class (years)											
		1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-119	120-139
Shortleaf pine	17.1	--	--	--	--	--	12.4	4.7	--	--	--	--	--
Eastern redcedar	2.1	--	.6	--	--	--	--	--	1.5	--	--	--	--
Eastern redcedar-hardwood	3.6	1.1	--	.8	--	1.7	--	--	--	--	--	--	--
Shortleaf pine-oak	35.3	--	--	--	--	--	8.3	12.7	10.8	--	3.5	--	--
Post-blackjack oak	141.9	--	--	--	--	--	--	22.4	34.6	30.7	7.6	35.1	11.5
Black-scarlet oak	303.2	--	--	--	--	--	--	68.2	135.5	38.2	30.6	30.7	--
White oak	147.4	--	--	--	--	--	--	--	43.7	34.4	38.5	15.4	15.4
Oak-gum-cypress	2.3	--	--	--	--	2.3	--	--	--	--	--	--	--
Elm-ash-cottonwood	15.8	--	--	--	--	--	--	2.9	6.6	6.3	--	--	--
Maple-beech	7.5	--	--	--	--	--	--	--	7.5	--	--	--	--
All forest types	676.2	1.1	.6	.8	--	4.0	20.7	110.9	240.2	109.6	80.2	81.2	26.9

1/ For a 10-year period.

Table 52.--*Area of allowable cut*[1/] *by thinnings on commercial forest land for 1972-1981, by forest type and stand-age class, Eastern Ozarks, Missouri*

(Thousand acres)

Forest type	All ages	Stand-age class (years)						
		0-9	10-19	20-29	30-39	40-49	50-59	60-69
Shortleaf pine	35.4	--	--	3.7	14.9	16.8	--	--
Shortleaf pine-oak	21.6	--	--	--	10.8	10.8	--	--
Black-scarlet oak	413.9	3.8	30.0	15.4	132.8	137.3	94.6	--
White oak	86.1	4.0	3.5	7.9	15.8	27.5	23.5	3.9
Elm-ash-cottonwood	26.2	--	--	10.3	6.6	9.3	--	--
Maple-beech	8.2	--	--	4.5	3.1	--	--	.6
All forest types	591.4	7.8	33.5	41.8	184.0	201.7	118.1	4.5

1/ For a 10-year period.

PRINCIPAL TREE SPECIES IN MISSOURI'S EASTERN OZARKS UNIT[3/]

SOFTWOOD SPECIES

Shortleaf pine . . . . . *Pinus echinata*
Eastern redcedar . . . . . *Juniperus virginiana*

HARD HARDWOOD SPECIES

Ashes:
White ash . . . . . *Fraxinus americana*
Green ash . . . . . *Fraxinus pennsylvanica*

Black walnut . . . . . *Juglans nigra*

Hard maples:
Sugar maple . . . . . *Acer saccharum*

Hickory group A:
Pecan . . . . . *Carya illinoensis*
Shellbark hickory . . . . . *Carya laciniosa*
Shagbark hickory . . . . . *Carya ovata*
Mockernut hickory . . . . . *Carya tomentosa*

Hickory group B:
Water hickory . . . . . *Carya aquatica*
Bitternut hickory . . . . . *Carya cordiformis*
Pignut hickory . . . . *Carya glabra* var. *glabra*
Black hickory . . . . . *Carya texana*

River birch . . . . . *Betula nigra*

Select white oaks:
White oak . . . . . *Quercus alba*
Bur oak . . . . . *Quercus macrocarpa*
Swamp chestnut oak . . . . . *Quercus michauxii*
Chinkapin oak . . . . . *Quercus muehlenbergii*
Swamp white oak . . . . . *Quercus bicolor*
Overcup oak . . . . . *Quercus lyrata*

Other white oaks:
Post oak . . . . . *Quercus stellata* var. *stellata*

Select red oaks:
Cherrybark oak . *Quercus falcata* var. *pagodaefolia*
Northern red oak . . . . . *Quercus rubra*
Shumard oak . . *Quercus shumardii* var. *shumardii*

Red oaks:
Scarlet oak . . . . . *Quercus coccinea*
Southern red oak . . *Quercus falcata* var. *falcata*
Black oak . . . . . *Quercus velutina*

Other red oaks:
Shingle oak . . . . . *Quercus imbricaria*
Blackjack oak . . . . . *Quercus marilandica*
Pin oak . . . . . *Quercus palustris*
Willow oak . . . . . *Quercus phellos*

Other hard hardwoods:
Black locust . . . . . *Robinia pseudoacacia*
Common persimmon . . . . . *Diospyros virginiana*
Flowering dogwood . . . . . *Cornus florida*
Honeylocust . . . . . *Gleditsia triacanthos*
Red mulberry . . . . . *Morus rubra*

SOFT HARDWOOD SPECIES

American basswood . . . . . *Tilia americana*
American sycamore . . . . . *Platanus occidentalis*
Black cherry . . . . . *Prunus serotina*
Butternut . . . . . *Juglans cinerea*

Cottonwoods:
Eastern cottonwood . . . . . *Populus deltoides*

Elms:
Winged elm . . . . . *Ulmus alata*
American elm . . . . . *Ulmus americana*
Slippery elm . . . . . *Ulmus rubra*
Rock elm . . . . . *Ulmus thomasii*

Soft maples:
Red maple . . . . . *Acer rubrum* var. *rubrum*
Silver maple . . . . . *Acer saccharinum*

Sweetgum . . . . . *Liquidambar styraciflua*

Tupelo and blackgum:
Blackgum . . . . . *Nyssa sylvatica* var. *biflora*

Other soft hardwoods:
Black willow . . . . . *Salix nigra*
Boxelder . . . . . *Acer negundo*
Hackberry . . . . . *Celtis occidentalis*
Sassafras . . . . . *Sassafras albidum*

3/ The common and scientific names are based on "Check List of Native and Naturalized Trees of the United States (Including Alaska)," by Elbert L. Little, Jr., U.S. Dep. Agric., Agric. Handb. 41, 472 p., 1953.

APPENDIX

ACCURACY OF SURVEY

Forest Survey information is based on a sampling procedure designed to provide reliable statistics at the State and Survey Unit levels. Consequently, the reported figures are estimates only. However, a measure of reliability of these figures is given by sampling errors. These sampling errors may be interpreted as meaning that the chances are two out of three that if a 100-percent inventory had been taken, using the same methods, the results would have been within the limits indicated.

For example, the estimated area of commercial forest land in the Eastern Ozarks Unit in 1972, 4,084.0 thousand acres, has a sampling error of ±0.8 percent (±32.7 thousand acres). The commercial forest area from a 100-percent inventory, then, would be expected to fall between 4,051.3 and 4,116.7 thousand acres (4,084.0 ± 32.7), there being a one in three chance that this is not the case.

Following are sampling errors for total estimated volume, net growth, and removals for both growing stock and sawtimber, and for area of commercial forest land during the 1972 Eastern Ozarks survey:

Item	*Eastern Ozarks Unit totals*	*Sampling error (Percent)*
Growing stock:		
Volume	28,045.6 M cords	2.2
Growth	903.0 M cords	3.1
Removals	517.7 M cords	6.6
Sawtimber:		
Volume	5,286.5 MM bd. ft.	3.2
Growth	124.0 MM bd. ft.	3.9
Removals	156.4 MM bd. ft.	5.6
Commercial forest land	4,084.0 M acres	.8

As survey data are broken down into units smaller than State or Survey Unit totals, the sampling error increases. The smaller the breakdown, the larger the sampling error. For example, the sampling error for area of commercial forest land in a particular county is higher than that for total commercial forest area in the Survey Unit. An approximation of the increasing sampling error can be obtained from table 53, which shows the sampling errors associated with estimates smaller than totals in the Eastern Ozarks Unit.

SURVEY PROCEDURE

The major steps in the survey of the Eastern Ozarks Unit were as follows:

1. A total of 29,119 1-acre points distributed systematically across aerial photos of the entire area were observed. These points were classified as either forest land (20,853) or nonforest land (8,266) in order to make a preliminary estimate of forest area. Next, 8,069 of the forest points were stereoclassified as to forest type, stand-size class, and density. Then 1,139 points classed as forest and 507 points classed as nonforest were examined on the ground to correct the preliminary area estimate for errors in classification and for actual changes in land use since the photos were taken. Some of the points examined were locations of permanent sample plots (each of which contained one variable-radius plot with basal area factor five) established during the 1959 survey. Of the 1,075 points determined to be on commercial forest land from ground examination, 444 were at previously unsampled locations and 10-point variable-radius plots (basal area factor 37.5) were established uniformly over the sample acre. The remaining 631 points were at formerly established permanent plot locations and were remeasured by superimposing 10-point variable-radius plots (basal area factor 37.5) over the existing plot in addition to remeasuring the basal area factor 5 plot. Tree measurements made on new and remeasured plots were the basis for estimates of timber volume, growth, mortality, number of trees, and other forest classifications.

2. Statistics on timber utilization in 1969 were obtained from mill surveys and from remeasurement of permanent sample plots. The Missouri Department of Conservation conducted a canvass of resident saw-

Table 53.--*Sampling errors*[1/] *for estimates smaller than unit totals of volume, net growth, and removals, and of area of commercial forest land, Eastern Ozarks, Missouri, 1972*

Sampling error (percent)	Commercial forest	Growing stock			Sawtimber		
		Inventory	Growth	Removals	Inventory	Growth	Removals
	Thousand acres	Thousand cords			Million board feet		
1	3,329.7						
2	832.4	39,377.3					
3	370.0	17,501.3	1,081.1		7,096.8	243.2	
4	208.1	9,844.5	608.1		3,991.9	136.8	
5	133.2	6,301.7	389.2	898.7	2,554.8	87.5	194.1
10	33.3	1,575.1	97.3	225.3	638.7	21.9	48.5
15	14.8	700.0	43.2	100.0	283.9	9.7	21.6
20	8.3	393.8	24.3	55.7	159.7	5.5	12.1
25	5.3	252.0	15.6	35.4	102.2	3.5	7.8
50	1.3	63.0	3.9	8.9	25.5	.9	1.9
100	.3	15.7	1.0	2.5	6.4	.2	.5

1/ At the 68-percent probability level.

mills, veneer mills, and other primary wood-using plants. The North Central Forest Experiment Station canvassed resident pulpmills, and the underground mining industry in Missouri, as well as out-of-State sawmills, pulpmills, and veneer mills to determine their use of timber from Missouri. Fuelwood and fencepost output was based on U.S. Census of Agriculture and Housing figures, a canvass of public and industrial timber owners, and a canvass of resident wood-treating plants. Estimates of primary mill residue used for fuelwood were obtained from the canvass of Missouri primary wood-using plants. Timber cut for products by owner class was determined by a canvass of all public and industrial timber owners. The portion of timber cut unaccounted for by the latter owners was grouped under "farmer and other owners."

3. To develop wood utilization factors used in converting timber products output to timber removals for saw logs, veneer logs, cooperage logs, pulpwood, and charcoal wood, 486 felled trees throughout the State were measured. Factors for all other products were obtained during the 1959-1960 Missouri utilization study.

4. Field data were sent to St. Paul where they were edited, punched on cards, and stored on magnetic tape for later machine sorting, computing, and tabulation.

ALLOWABLE CUT

Allowable cut is the estimated volume of timber on commercial forest land that could be cut annually for the next 10 years, while improving tree stocking and bringing about a more even distribution of age classes. In Missouri, annual allowable cut is shown separately as that from harvest cutting and from thinnings, and was determined by computer using an area control system for determining the number of acres to be cut annually.

The harvest cut of sawtimber was calculated from stands of forest types normally managed for sawtimber whose site index and age indicated they were ready for harvest, or would be within the next 10 years. Table 54 shows the site index used in these calculations for each forest type to determine whether the objective of management would be to grow sawtimber or pulpwood. Included also is the rotation age for each.

Stands that did not qualify for harvest during that period were checked to see if they were overstocked by basal area standards, or would be within the next 10 years. Stands determined to be overstocked were "thinned" by the computer back to their recommended basal area stocking level, and the volume of sawtimber trees "thinned" was added to the volume of allowable cut by thinnings of sawtimber. The volume of poletimber trees "thinned" was added to the growing-stock allowable cut by thinnings. In scheduling thinnings, the computer program first "removes" rough and rotten trees, then short-log trees, and finally, growing-stock trees.

Table 54.--*Forest type, site index, and rotation age, by management objective, used in calculation of annual allowable cut, Missouri, 1972*

Forest type	Site index	Rotation age	Management objective
		Years	
Shortleaf pine	50 or higher	60	Sawtimber
	Less than 50	40	Pulpwood
Shortleaf pine-oak	60 or higher	80	Sawtimber
	Less than 60	50	Pulpwood
Eastern redcedar	35 or higher	55	Sawtimber
	Less than 35	70	Sawtimber
Eastern redcedar-hardwood	45 or higher	50	Sawtimber
	Less than 45	60	Sawtimber
Black-scarlet oak	60 or higher	80	Sawtimber
	Less than 60	50	Pulpwood
White oak	60 or higher	80	Sawtimber
	Less than 60	50	Pulpwood
Post-blackjack oak	All sites	50	Pulpwood
Oak-gum-cypress	All sites	60	Sawtimber
Cottonwood	All sites	30	Sawtimber
Elm-ash-cottonwood	All sites	50	Sawtimber
Maple-beech	All sites	90	Sawtimber

The harvest cut of growing stock included that of sawtimber in addition to the volume from stands of forest types normally managed for pulpwood that were or would be rotation age within the next 10 years.

Allowable cut is based on the assumptions that all timber will be available and accessible when needed, and that a ready market will exist for every species, size, and grade of material harvested. Further, it assumes that the proper sequence of cutting is known and will be followed, and that logging practices employed will result in an improved forest. Because there is no way of guaranteeing that these assumptions will be carried out during the next 10 years, the allowable cut estimates should be compared with timber removals figures only in a general way.

LOG GRADE

In the Eastern Ozarks Unit, the butt log of each sawtimber tree (2,201 trees) on every permanent sample plot was log-graded. Additionally, all of the logs in a smaller sample of trees harvested throughout the State (265 trees) were log-graded. The volume yield by log grade for each tree in the latter sample was used to distribute the volume of trees in the former sample into log grade classes. The resulting volumes by log grade classes were expanded to provide an estimate for the entire Unit.

Logs are graded on the basis of external characteristics as indicators of quality. Hardwood species were graded according to "Hardwood Log Grades for Standard Lumber and How to Use Them," published by the Forest Products Laboratory under the designation D1737A, 1961, and USDA Forest Service standards for hardwood tie and timber logs. The best 12-foot section of the lowest 16-foot hardwood log, or the best 12-foot upper section if the butt log did not meet minimum log-grade standards, was graded.

Shortleaf pine was graded according to "Interim Southern Pine Log Grades," USDA Forest Service, 1953. All other softwoods were graded according to "Specifications for Log Grades of Hardwoods and Softwoods," Northern Hemlock and Hardwood Association, 1947. The lowest 16-foot log in softwood trees or a shorter log to a minimum of 12 feet if a 16-foot butt log was not present, was graded.

☆U.S. Government Printing Office: 1974—762-891

Essex, Burton L., and John S. Spencer, Jr.
1974. Timber resource of Missouri's Eastern Ozarks, 1972.
North Cent. For. Exp. Stn., St. Paul, Minn. 62 p.
(USDA For. Serv. Resour. Bull. NC-19)

The third timber inventory of Missouri's Eastern Ozarks Forest Survey Unit shows that there was a substantial gain in the volume of growing stock and a smaller but sizable gain in the volume of sawtimber between 1959 and 1972; however, the area of commercial forest land declined slightly. This report gives statistical highlights and tables presenting detailed information concerning forest area as well as timber volume, growth, mortality, ownership, and use.

OXFORD: 524.1:905.2(778). KEY WORDS: timber volume, growth, utilization, forest areas.

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Some Recent Forest Survey Reports Published by
the North Central Forest Experiment Station

Primary forest products industry and industrial roundwood production, Michigan, 1969, by James E. Blyth and Allen H. Boelter. USDA For. Serv. Resour. Bull. NC-12, 12 p., illus. 1971.

Kansas saw-log production jumps 38 percent from 1964 to 1969, by James E. Blyth and Leonard K. Gould. USDA For. Serv. Res. Note NC-128, 2 p., illus. 1971.

Wisconsin's 1968 timber resource--a perspective, by John S. Spencer, Jr. and Harry W. Thorne. USDA For. Serv. Resour. Bull. NC-15, 80 p., illus. 1972.

Missouri's primary forest products output and industries, 1969, by James E. Blyth and Robert Massengale. USDA For. Serv. Resour. Bull. NC-16, 15 p., illus. 1972.

Forest area in Wisconsin counties, 1968, by Burton L. Essex. USDA For. Serv. Res. Note NC-135, 4 p., illus. 1972.

Iowa saw-log production and sawmill industry, 1969, by James E. Blyth and William A. Farris. USDA For. Serv. Res. Note NC-136, 4 p., illus. 1972.

Timber volume in Wisconsin counties, by Arnold J. Ostrom. USDA For. Serv. Res. Note NC-145, 4 p., illus. 1972.

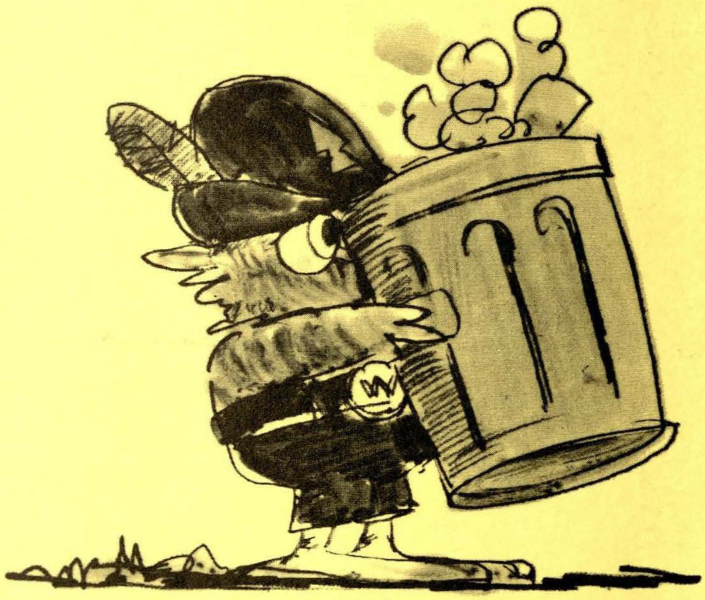
Pulpwood production in the North Central Region by county, 1971, by James E. Blyth. USDA For. Serv. Resour. Bull. NC-17, 21 p., illus. 1973.

Pulpwood production in the North Central Region by county, 1972, by James E. Blyth. USDA For. Serv. Resour. Bull. NC-18, 16 p., illus. 1973.

Lake States pulpwood production dips to 4 million cords in 1971, by James E. Blyth. USDA For. Serv. Res. Note NC-148, 3 p. 1973.

Local net timber volume equations for Wisconsin, by Jerold T. Hahn. USDA For. Serv. Res. Note NC-149, 4 p., illus. 1973.

Pulpwood production in the Lake States by county, 1972, by James E. Blyth. USDA For. Serv. Res. Note NC-152, 4 p. 1973.



Put trash in the proper place.